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The Study of Lameness.

Many readers will find matter for reflection in Prof. Macqueen's speech at the Central V.M.S. during the discussion of Capt. Jolliffe's paper on "Lameness"—a paper which, like the Professor's criticism, was not only instructive, but also extremely suggestive. One point especially worthy of the attention of practitioners is the insistence upon the importance of anatomical knowledge. Of course this applies to many clinical subjects other than lameness, and further, it involves a question which may soon have to be settled between the Council and the schools. Many—probably most—students complete their anatomical course without fully realising the practical importance of the subject, and even those who do grasp its importance from the first find the time allotted to its study all too short. Few, therefore, will disagree with Prof. Macqueen's suggestion of the advisability of instituting a post-graduate course in surgical anatomy. Many will go further, and ask whether it is not also advisable to introduce a separate course and a special examination in surgical anatomy into the second half of the curriculum for the Membership.

As far as lameness is concerned, there can be no question of the importance of anatomy, and probably almost every practitioner engaged in horse practice would do well to follow Prof. Macqueen's advice, and revise his knowledge of the subject. "A good working knowledge" was the Professor's stated requirement, but he would probably agree that a clinician's acquaintance with the whole of the structures comprised in the equine limb cannot possibly be too exact. To this it may be added that anatomy should be supplemented by physiology, and that the detailed study of the co-operative antagonism of muscles, which can only be pursued with the aid of a sound knowledge of anatomy, offers a special line of work which, from the majority of veterinarians, has certainly not yet received the attention it deserves.

Pathology, of course, is important; and last, but by no means least, comes careful and constant clinical observation of lameness, followed, whenever possible, by post-mortem examination.

No branch of veterinary work is more important than lameness; none more difficult; and none, perhaps, will better and more tangibly repay the study of the working practitioner. Practical experience is essential to diagnosis and treatment, as every clinician knows, but it should never be forgotten that a practitioner should also fortify himself with as accurate a knowledge as possible of the anatomy and physiology of locomotion.

CHLORAL HYDRATE.

After the recent editorial comments on the introduction of this drug, the following notes may be of some interest.

Chloral hydrate was discovered by Liebig in 1832, but though it was investigated by Dumas, who determined its chemical formula, its introduction to medicine is due to the late Dr. Liebreich of Berlin. He, in 1869, suggested that if chloral hydrate were administered internally the alkalies of the blood would slowly split it up, and that chloroform would thus be generated in the circulating blood over a considerable length of time.

His expectations that chloral hydrate would produce sleep and relieve pain proved correct, but the theory upon which they were founded was erroneous. This drug appears to exert its hypnotic and analgesic properties without undergoing alteration in the body. Chloroform is not found to be present either in the blood or in the expired air of chloralised animals, whilst it is excreted in the urine as chloral or as uro-chloralic acid so long as the urine is acid. Urine containing uro-chloralic acid reduces Fehling's solution.

In alkaline urine the excreted chloral is broken up, and yields chloroform.

Chloral hydrate is a powerful antiseptic; it destroys low organisms and prevents the decompositions to which they give rise. In the proportion of one grain to the fluid ounce it is an excellent preservative of hypodermic solutions. An aqueous solution on keeping tends to become acid, but the addition of some Liquor rosæ dulc. in my experience tends to prevent this.

The solvent powers of a strong solution of this drug are somewhat remarkable, and make it an effective agent in clearing vegetable preparations for microscopical examination. It is the only known solvent of gum resins, the addition of water to such a solution separates the resin, whilst the addition of alcohol separates the gum.

In large doses chloral hydrate is a powerful poison, it depresses the heart, slows respiration, and lowers the temperature. Lauder Brunton found that the fall of temperature was so great as to alone cause death. A state of deep coma results from poisoning.

Owing to its vesicating effects, chloral hydrate should be administered well diluted with water, but the writer is in the habit of administering it in gelatine capsules and has never noticed any bad effects.

Along with Potassium bromide it is used by many in the treatment of milk fever, and in the West of

Scotland it is no uncommon sight to see bottles of the different "crystals" lying in the byres.

In testing for chloral we may recognise it by its melon-like odour. The best test is the formation of chloroform when chloral and an alkali are brought into contact. Add Liquor potassæ to the solution to be tested, warm it, and if chloral be present chloroform is formed, along with formate of potass. After boiling off the chloroform and neutralising the excess of alkali the formate will reduce a solution of silver nitrate.

In conclusion, I trust that some readers will send in their experiences of the posology and toxicology of this drug.

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ABSTRACTS FROM FOREIGN JOURNALS.

Singular Case of Intermittent Wheezing in a Cow.

Chronic and permanent wheezing, rather common in cattle, generally denotes the existence of tuberculous or actinomycocic growths; intermittent wheezing, much more rare, most commonly appears in cases of polypi of the pharynx. These tumours, generally pedunculated and movable, are brought sometimes towards the œsophageal orifice, sometimes towards the larynx or the guttural openings of the nasal cavities. The result is a partial obstruction of the air passages, causing a sound of intense wheezing, which may disappear upon coughing.

M. Cuny, in the *Journal de Méd Vét. de Lyon*, records a case of intermittent wheezing which, instead of being closely connected with the existence of a tumour, appeared to depend solely upon a deformity of the trachea. The subject was a cow, which had been affected for about three months, and was believed to have swallowed a nail. At first, the periods of remission were very long; they shortened more and more, and during the three days which preceded the animal's entry into the Lyons school, the abnormal sounds were heard incessantly, and at their maximum intensity. Despite this, the animal continued to feed well.

When the cow arrived at the school, the noise that she made was so loud as to be clearly audible more than 100 yards away. It increased in intensity when she was obliged to lower her head to eat. A particularly curious symptom was that the sound ceased for short moments, to recommence afterwards with the same characters as before.

Examination of the nasal and pharyngeal cavities, and of the larynx, gave negative results; but M. Cuny found a very pronounced deformity of the trachea, which was amply sufficient to explain the origin of the symptoms present. Normal in its superior portion, it was distinctly flattened from side to side for the rest of its extent, rendering its lower edge very trenchant.

During the wheezing, by palpation, very intense vibrations were felt all along the length of the trachea, but especially in the contracted portion. By methodical and progressive compression of the cartilages, it was possible to easily change the *timbre* of the sounds emitted. M. Cuny accordingly diagnosed a direct relation between the respiratory troubles and the tracheal deformity.

On autopsy no lesion of the respiratory organs was found, beyond the aforesaid flattening, which, for a length of 16 inches, was so pronounced that the superior and inferior aspects of the trachea were reduced to the condition of veritable cutting edges. In that part, the deviation of the lateral walls reduced the lumen of the trachea to a narrow slit having a maximum breadth of about a centimetre (4-10 inch.)

This observation shows that intermittent wheezing does not depend exclusively upon pedunculated tumours of the pharynx, but may develop slowly from deformities and contractions of the trachea. It also shows the necessity for a complete examination and a correct diagnosis where a temporary tracheotomy seems necessary, in cases which threaten asphyxia.—(*Annales de Méd. Vét.*)

Treatment of Sero-Sanguinous Effusions by Injections of Pure Tincture of Iodine.

MM. Cadix and Pineau (veterinary surgeons to the 3rd Chasseurs) treat "sero-sanguinous abscesses" in this manner. Under antiseptic precautions, they puncture the swelling at its dependent part with the large needle of a Pravaz syringe, and give exit to about a third of the liquid; they then inject from ½ to 1 drachm (according to the size of the cavity) of pure tincture of iodine, and massage the part to assure the distribution of the injection in the liquid still remaining, and its contact with the walls of the cavity.

Where the sero-sanguinous effusion is accompanied by marked œdema, they apply astringent poultices for a few days previously.

For the first six or eight days, the part is augmented in size; the absorption of the liquid then commences and is generally complete at the end of fifteen days. The treatment does not prevent the animal from working.

The authors quote six cases in which horses affected with "sero-sanguinous abscesses" in diverse regions have been rapidly cured by this treatment.—(*Le Bulletin Vétérinaire.* Ex. *Recueil d'Alfort.*

W. R. C.

[The abstract which I translate does not state how often the injections are repeated—or if the first injection is repeated at all. But the idea of removing only a portion of the liquid and introducing iodine into the remainder is probably new to most English practitioners, some of whom may care to try it.—Trans.]

At a meeting of the Society of Tropical Diseases on July 8th M. Brumpt stated that he has lately received a batch of 110 Abyssinian ticks, Ornithodorus moubata, with which he has succeeded in infecting a monkey. Tick fever has been known since 1903 but hitherto only in the Congo and German East Africa. This spirochætal disease must be spread over a wide area in Abyssinia, for Ornithodorus is found in all the hot sandy valleys and, unlike the other ticks, has its exclusive habitat in the soil.—*The Lancet.*

THE STRUGGLE AGAINST TUBERCULOSIS IN CATTLE IN DENMARK.

When Dr. Koch demonstrated that an injection of tuberculin produced reaction in a tuberculous subject, the idea was first suggested to us that this medium might be of service in our struggle against tuberculosis in domestic animals, and especially in cattle, and when in 1890, experiments were made in several countries to ascertain the effects of injections of tuberculin upon bovine species, I was one of the first to make use, on a large scale, of this new agent. The result of my experiments, as of that of many others, goes to show that tuberculin is by no means an infallible diagnostic. As a matter of fact, in a few cases, it may happen that reaction does not take place in tuberculous animals, while on the other hand, reaction may be manifested in animals which do not show the slightest symptoms of tuberculosis. The latter cases, however, are extremely rare, and are no doubt due, for the most part to imperfect examination, which is easily explained by the fact that tiny tubercles, of the size of a pin's head, are sufficient to produce reaction. During the examination of a slaughtered bullock, such very small formations may easily escape detection, especially if the lesions happen to be situated in parts where they are not expected to be met with. A further contingency has also to be taken into consideration ; a beast which has been injected may contract temporary fever the day after the operation, and thus may wrongly be considered as having reacted. If on the contrary, reaction had not set in upon animals which are found to be tuberculous after slaughter, the explanation would be more difficult to find. It is a fact that some experts contend that the tuberculin test is an absolute certainty, maintaining that in usual practice the temperature is not taken often enough, and that if the doses had been repeated more often, extending them for a longer period, reaction would certainly have taken place. That may be so. But under practical conditions, it must be admitted that there are cases in which reaction does not take place. Most of these, however, are of little importance, and refer to changes in old tissues which are partially calcified and encysted. The animal appears to be on the way to recovery, and to all appearance, does not present any danger of infection to others.

A more serious case, however, is that which is met with sometimes, though rarely enough, and in which no reaction takes place in animals which are very tuberculous and very dangerous as a source of infection. This is a fact which was undeniably established at an early date, and which we may acknowledge as an objection against the use of tuberculin as a diagnostic for the bovine race. We may, however, observe that in such cases, it is generally possible to recognise the existence of the disease by means of a close clinical examination. Therefore, this examination should never be neglected.

But though the injection of tuberculin is not an infallible means of diagnosis, its introduction is a great step towards progress in detecting the existence of tuberculosis in cattle. Owing to tuberculin, we are in a position to recognise the disease in its very earliest stage, and in cases where its development is a minimum. It can be said, without exaggeration, that the use of tuberculin has entirely changed, even revolutionised our ideas upon bovine tuberculosis. It was previously known, by statistics in the large slaughter houses, that in some places, tuberculosis was very much more disseminated than it was believed to be : thus, during the years 1888 to 1891, 16 to 18 per cent. of the adult cattle taken to the slaughter houses of Copenhagen, were found to be more or less affected with tuberculosis. But it was with great astonishment in 1891 and in the following years, that it was found that out of large herds which appeared to be perfectly healthy, and which were subjected to the tuberculin test, 80 per cent of the cows, 40 to 70 per cent. of the bulls and bullocks, 40 per cent. of the heifers and steers, had reacted to tuberculin. These figures were given first by Messrs. Kopp and Gutmann at Dorpat, by myself in Denmark, and by Mr. Siedamgrotzky in Saxony. Later on, similar results were obtained nearly everywhere. At first, the farmers could not understand it at all. In fact it had been the custom to recognise only the cases where tuberculosis was manifested by obvious symptoms, such as coughing, losing flesh, etc., which in the case of the herds in question, had only appeared in 5 per cent. of the animals. And now it was discovered, that by the use of tuberculin a large proportion of heads of cattle, sometimes the whole, were affected in most of the herds. And this was particularly the case among the large herds, in which it had existed for several years. As it was then the general belief that tuberculosis was incurable, not only contagious but also hereditary in the highest degree, it was natural that they lost heart when it was observed that not only the milch-cows but also strong bulls, heifers and young steers showed the reaction of tuberculosis.

The years that have elapsed have thrown more light upon the nature of tuberculosis. We now know that it is practically rare that calves are born tuberculous, even though the cow and bull should be affected with the disease.

Statistical results taken from the slaughter-houses of Aarhus in Jutland (a region where tuberculous raged) show that only about 0·3 per cent. of the calves are born with tuberculosis. At Kiel, a rather higher figure was observed, but did not exceed 1·18 per cent. The existence of any predisposition to the disease is absent in the offspring of tuberculous cattle. This opinion does not meet with any support in science ; yet, admitting that such a predisposition might be revealed, it would make no material difference to the cattle, if suitable measures were provided in order to prevent these animals from absorbing the infection.

I have now arrived at one of the essential points of the theory of the struggle against tuberculosis in cattle ; the idea of the ubiquity of tubercular bacilli is absolutely erroneous. It is a well known fact that, in the minds of many people the belief is deeply rooted that in countries where tuberculosis rages the bacilli have so accumulated in stables, in houses, and everywhere, that the opportunity of absorbing them is constant. Even before the discovery of tuberculin my researches on bovine tuberculosis in Denmark led me to doubt this belief. On the one hand, I was almost certain of being able to demonstrate that at the end of the 18th century and the beginning of the 19th our cattle were exempt, so to speak, from tuberculosis, and that the disease had been imported during the course of the 19th century. It was first brought by Swiss cattle, then by Schleswig, and by Shorthorns from England. On the other hand I gathered from reports of numerous veterinary surgeons that while spreading gradually in many countries the disease had not reached certain regions. It attacks herds that were continually being augmented by breeding in their own midst, whilst the disease was also observed among herds to which were added those imported from other countries. On several occasions the disease was traced to the introduction of an infected animal.

When tuberculin first made its appearance I was very anxious to learn in how far these herds (which were apparently healthy) would succeed in passing this severe test. In 1892 I examined two of these, one consisting of 38 head of cattle and the other of 39, without obtaining a single reaction. Thus it was proved that there existed absolutely healthy herds. What was of particular interest was the fact that these two herds consisted

for the most part of milch cows which had been awarded several prizes at exhibitions, and that each of these herds had been created by breeding among themselves. According to general opinion, such animals would be particularly predisposed to tuberculosis. In reality they were absolutely exempt from any disease, no strange animal having been introduced into the herd for many years.

A multitude of tests made with tuberculin in Denmark has shown that, fortunately, a large number of herds are thoroughly healthy. Of 10,344 herds examined to January, 1904, 2,664 (consisting of 33,946 heads) that is to say more than one-fourth, were found on first examination to be healthy. It must be admitted that most of these were small herds (under 25 heads), nevertheless 153 of them consisted of 26 to 55 heads.

Many of these healthy herds consist of excellent milch cows. It is thus proved that the idea which was formerly very general that tuberculosis was a "necessary evil" is entirely erroneous. Tuberculosis does not necessarily follow the effort made in order to get as large a supply of milk as possible. It appears when infection is brought in, not otherwise.

My researches have led me to gather at an early date that infection is occasioned through two channels, either by prolonged cohabitation with tuberculous cattle, especially in closed spaces (such as stables) or by feeding them with milk containing tubercular bacilli. This latter channel is of great importance as regards young calves. In 1891 I have already shown by a post-mortem examination on 35 calves, drawn from two separate herds which had reacted, that 24 of them had been infected through the medium of the milk supply. In fact the seat of the disease was in the lymphatic glands above the throat or in the mesentery, or at any rate was found there in a greater degree than elsewhere, that is, by the way that food is taken. From these facts I drew the following conclusions :—

1. Cattle which have remained healthy up to the present may be kept free from tuberculosis in the future, if care be taken to avoid the importation of disease.

2. It would be possible to change successively a herd infected with tuberculosis into a healthy one. In order to do this a new born calf should immediately after birth be taken from its infected mother and brought into quarters free from contagion and given milk containing no tubercular bacilli. Congenital tuberculosis is only to be feared in calves whose mothers are very severely affected. In fact the infection of the fœtus, apart from germinative infection, which is extremely rare, lies in the fact that the blood of the mother contains tubercular bacilli. For this reason I should not advise the rearing of calves from cows who are badly affected, and recommend the rearing of calves only from healthy looking cows, although they or the sires may have reacted to the tuberculin test.

To begin with I tested calves with tuberculin at a relatively early stage in order to separate those which were affected with congenital tuberculosis. Experiments proved that this was a superfluous precaution. In order to avoid infection through milk I boiled it, or brought it to a temperature of 85 degrees, but found that the calves did not stand boiled milk so soon after birth. Therefore the first day I gave them the colostrum of the mother, but the second day they already assimilated boiled milk. Of course, instead of boiled milk, milk from absolutely healthy cows, should there be any in the herd, may be given in the raw state.

In order to hasten the formation of a new healthy herd from the basis of an old one more or less infected, I advised the testing of these animals and to take those which had not reacted into other quarters than those which had reacted. In cases where this means of procuring thorough isolation between those which reacted and those which did not was unattainable, I suggested that the stable should be divided by thick wooden partitions.

Seeing the importance of demonstrating by experiment the possibility of forming a healthy herd, I applied to the Government for a subsidy to make this experiment with a herd in Seeland, in Thurebylille, consisting of 208 head. Tuberculosis was so prevalent that more than 80 per cent. of the cows and heifers and steers reacted to the test. Conditions were unfavourable to isolation ; it was impossible to obtain isolation except by the division of a large stable by means of a thick wooden partition. The stable for the calves communicated with the healthy section.

I gathered immediately from the first that with such a close gathering of healthy and affected animals the liability to infection was very great for some of the healthy animals, even though they were well separated, and had the two sections attended to by a different staff, and made them graze in different meadows. Nevertheless, there was every chance of tubercle bacilli being thrown out little by little and being transmitted to healthy animals. Moreover, I knew that tuberculin was not always, in practice, an infallible diagnostic. It might be possible therefore to commit the error of having in the healthy section one or more animals which should never have been there. There was also the possibility of an animal being infected immediately before the test, and which would not react at first, but the disease might develop afterwards. For this reason I thought it advisable to repeat the test among the healthy animals every six months, as a rule the testing only takes place once a year, though on some large farms these tests take place, as in Thurebylille, twice a year, thinking thus to separate in time from the healthy section those animals which had been wrongly admitted, or those which had become affected in spite of isolation, I allowed those which had reacted to live, breed, and to supply milk as long as they appeared healthy. A large number of these animals appeared healthy, and knowing the slow progress of tuberculosis I supposed that in a good many cases the disease remained stationary for several years, or was even curable. I did not consider it, therefore, necessary to interfere with the owner in the use of his cows on the mere fact of their having reacted to tuberculin. The reaction indicated infection but not the degree to which it was effected. This was a question on which clinical examination alone could decide. Should this examination prove advanced tuberculosis, of course the sooner they were slaughtered the better. If, on the contrary, these animals were clinically healthy, or very slightly affected, they might be used, being careful, however, to keep them where they offered the best guarantee against the propagation of the infection to other absolutely healthy animals. These were the simple principles upon which I laid the foundation of the struggle against tuberculosis.

In April, 1892, the work of experimenting in Thurebylille was begun. The result of the first year was very satisfactory, only a small number of animals reacted when the testing was repeated at the end of the six months. Later on an increase in reaction was observed. Thus in April, 1898, there were in all 16 heads of cattle out of 172. The cause of this was probably the fact that too little attention was paid to the large section of those which reacted, and which had been left too long. Moreover, this region presented in many instances local disadvantages. Finally, however, a happy result was obtained. To begin with, in 1892, there were 131 animals reacting and 77 non-reacting ; in 1899, 44 animals reacted, and 183 did not. In 1901, the last of those reacting were sold ; and in 1902, a herd of 244 healthy animals was obtained, resulting from the rearing of calves on the spot, and consequently for the most part from reacting mothers. Testing is still being continued, the farm supplying milk to the children of Copenhagen.

In the spring of 1903 a slight trace of tuberculosis was found in a calf, which had no doubt been infected by drinking the skimmed milk from a dairy. In 1903 the number of heads was 246. At the testing only one single animal showed signs of doubtful reaction. It was slaughtered and was found to be absolutely healthy.

In 1893, similar experiments were possible in other regions. On the 14th April, 1893, a law was promulgated for Government subsidies to combat bovine tuberculosis; an annual sum of 50,000 crowns was set aside for the help of those who wished to have recourse to tuberculin to combat tuberculosis among their cattle. On the promise of the owner to completely isolate the healthy animals from those which had reacted, he was gratuitously supplied with tuberculin, and the fees of the veterinary surgeons who attended were also paid. Some year later, the sum was raised to 100,000 crowns. In the beginning, the State only paid the expenses of the tests on heifers and young steers, whilst the owners bore the costs, if they wished the adult animals to be also tested. But in 1895, tuberculin was given gratuitously for the use of adult animals, and when the law was revised in 1898, it was decreed that the entire costs of the tests should be borne by the State. At the same time, it was made compulsory for calves to be supplied with boiled milk or milk drawn from cows who had not reacted, and to thoroughly disinfect the quarters to which the healthy animals were taken.

These are the principles which have ruled in Denmark since 1893. The first year, the farmers were rather cautious. But the following table shows that during the succeeding years, a large number of animals were tested. After the year 1898, there was a decrease; but from 1902 there was again a slight increase:

	Herds.		No. of Animals Tested.		Per cent.
	Total No.	First test.	Total No.	Reacted.	reaction.
From April, 1893, to June, 1894	327	327	8401	3362	40·0
June, 1894, to Oct., 1895	1873	1645	44,902	17,303	38·5
Oct., 1895, to May, 1896	930	749	20,791	6,622	31·9
May, 1896, to June, 1897	7316	3012	84,897	21,668	25·5
June, 1897, to May, 1898		2165	65,788	15,642	23·8
May, 1898, to Jan., 1899	1454	618	35,533	7725	21·7
Jan., 1899, to Dec., 1899	1293	543	33,568	6759	20·1
Jan., 1900, to Dec., 1900	1101	417	26,078	4976	18·0
Jan., 1901, to Dec., 1901	695	259	18,818	2857	15·2
Jan., 1902, to Dec., 1992	895	396	23,347	3531	10·8
Jan., 1903, to Dec., 1903	646	213	19,364	2875	14·8
Jan., 1904, to Dec., 1904	738	277	23,164	3750	16·2
Total	17,268	10,621	404,651	97,070	24·0

The causes of this retrograde movement are various. No doubt the principle one is the slowness with which, in the nature of things, the method which is laborious, is accomplished. It is slow in the case of cattle which are affected with tuberculosis. A number of years must elapse before the animals have grown and others have disappeared. And if, as is most often the case, the isolation of the healthy animals from those affected entails a certain amount of laborious work, there are to be found owners who do not take enough interest in the matter to bring it to a satisfactory end. This is often the case when they find that on the renewal of tests, not a small number of the animals which appeared healthy at the first test are found to have reacted on a second test. This is a thing which is likely to happen very often, and I endeavoured from the first to point this out. It is on this account that a renewal of the tests should take place, and a thorough understanding on this point should be considered when this work is taken in hand. It is possible, that at the beginning this fact was not enough taken into consideration.

Perseverance is unfortunately not a common quality, and it is difficult to awaken interest for novelties. If it were possible to find a means to exterminate disease in one swoop, everybody would give in at once, but people lose interest in anything which requires, for several years, exhaustive and careful work, not only on the part of the owner himself, but also on the part of his staff. If during the course of a single year, reactions are numerous, the desire to proceed with the work is lessened, and a too willing ear given to the numerous voices that say that such a thing is not to be realised, and that it is all "humbug." The gross abuse in the employment of tuberculin in order to give immunity to cattle destined for the market, has greatly contributed to diminish the confidence in the tuberculin test. Many people find it difficult to understand that the fact of tuberculin being misused does not necessarily diminish its value, if it is made use of in a proper manner, in order to detect infected animals among the herds.

We have stated that the method is laborious. This is not, however, invariably the case. If the owner has two farms he may be able to put the healthy animals in one, and those which react in the other. He would thus have for a certain time a convenient method of isolation which would be much more effective. Naturally, the more complete the isolation, the better the result obtained. If the healthy animals are on a separate farm, they are likely to remain healthy; at any rate, only a very restricted number would probably react at a further test.

Should the isolation be be confined to one farm, a safer result would be obtained by separating the healthy animals in another building to that in which are located the affected ones. A solid partition, built of bricks rather than wood, is preferable to a partition provided with a door, even should this remain closed and not in use. We therefore strongly recommend the most complete isolation from the very start. The results would on the average be the more satisfactory when the importance of this precaution is realised. There is no doubt that it would pay better, in the long run, to make a little sacrifice at first, in order to procure healthy animals in well isolated stables. In general, the costs are not very heavy. The temporary buildings need not be of the finest structure, and as in most cases it is the young animals which are healthy, stables of the most primitive type will be sufficient.

The Report of the Veterinary Officer, Inspector of Meat, Etc., Newcastle-on-Tyne.

[ABSTRACT].

The animals of the City and County of Newcastle-upon-Tyne have remained comparatively free from contagious diseases (as defined by the Act) during the past nine months. Besides horses, cattle, sheep, pigs and dogs within the city, animals which have been subjected to regular and frequent inspection include those stationed at, or passing through the Cattle and licensed Pig Lairs; the Railway (animals' arrival) Docks; the Horse and Cattle Fairs on Town Moor; the Horse and Cattle Fairs in Cattle Markets; the Cattle, Sheep and Pig Markets; the Dog Shows; the Foreign Animals Arrival Docks (St. Lawrence Sanatorium); the Quayside (old and infirm horses exported for food purposes).

Cattle and Licensed Pig Lairs.—There are 20 cattle and 9 licensed pig lairs. One of the pig lairs has ceased to be used as such, no further licence being applied for. In connection with the largest group of cattle and pig lairs in the city, decided sanitary improvements are being made. Leading to and separating the buildings are roads which are being reconstructed, concrete being used, and the drainage is being put in thorough repair, so that cleansing and disinfection may be carried out as required.

Cattle Markets.—The following Table shows the number of cattle, etc., exposed for sale in the Newcastle Cattle Market during the year, and the number for a year's period ten and twenty years ago respectively:—

Year.	Cattle.	Calves.	Sheep.	Swine.
1907	95,993	8,719	306,777	37,789
1897	99,084	7,304	340,382	31,798
1887	110,064	8,780	325,483	28,964

The number of old and infirm horses that have been shipped to go to the Continent during the year 1907 is 2,678.

Anthrax.—Two cases occurred, one being in respect of a bullock which was found dead in a slaughter-house.

Swine Fever.—An outbreak occurred in May on premises at the west end of the city, where fifty-two pigs were kept. Five were attacked with the disease, four of which died, and the remaining one was ordered to be slaughtered. No further outbreak has occurred in the city.

Rabies.—Several cases of suspected rabies in the dog have been reported. In every case on examination it was found that the disease did not exist.

Glanders.—A new order of the Board of Agriculture, known as the "Glanders and Farcy Order of 1907," came into force on January 1st, 1908. This Order will do more to eradicate this contagious equine disease (which is a dangerous one to the human subject) than any measure hitherto adopted.

Tuberculosis and other diseases.—Cases have been found to exist both in cowsheds and cattle markets, etc.

Dairies, Cowsheds, and Milkshops Order.—There are forty-four cowkeepers within the City and County of Newcastle, who possess a total of five hundred and forty milch cows. During the year two persons have given up, whilst one has commenced the business of cowkeeping. Two of the cowsheds have been completely rebuilt, others have been altered and repaired from time to time, whilst cause for complaint, owing to uncleanliness, has existed on several occasions, but in each case a request to correct matters, either by letter or verbally, has been complied with. Owing to the structural arrangements of several cowsheds being hygienically imperfect, the whole are being measured in all dimensions with a view to having those dealt with that are below the requirements for the health and good condition of the cows, and cleanly surroundings of milk production. It has been necessary on several occasions to request the owners to cleanse the udders and wash the teats of their cows previous to milking, so as to minimise the risk of contaminating the milk with filth.

Disease Amongst the Cows.

Nine cows were found clinically affected with tuberculosis, and in four of these cases the disease was found affecting the udder. Such cows, whilst they were in the cowsheds and being milked twice daily, were consequently pouring tubercle bacilli into the milk pail. Within a few hours the milk containing these dangerous germs would find its way into the homes of a considerable number of Newcastle inhabitants, and there probably claim fresh recruits for the army of consumptives. As there is proportionately only one dairy cow to every 500 persons in Newcastle, it must follow that most of the milk supplying these persons arrives from districts outside the city, and owing to there being practically no official veterinary inspection of the dairy cows in the country districts and many other towns, milk must consequently come in wholesale from diseased cows.

Many of the diseased cows in country districts are only disposed of when their quantitive milk supply is a financial failure, and then their owners send them to the cattle market to be sold, if possible, for slaughter for food purposes.

Besides tuberculosis other diseases affect the udders of cows, which, through the medium of the milk, are a danger to the consumer. All diseases of udder, therefore, receive particular attention.

As tuberculous meat ought never to be admitted as being fit for food, and owing to the scattered distribution of slaughter-houses (in the absence of public abattoirs) interfering with complete inspection, and the fact that no inspection whatever obtains in many districts, the time has arrived when, in the interests of public health, legislation should provide for—

1.—The gradual eradication of the disease from the herds of this country.

2.—The payment equally by farmers and butchers of a small fee per head of cattle (excluding cows and old or emaciated animals), purchased and slaughtered immediately for food purposes only, as insurance against the disease, and the balance of all losses to be compensated for out of the public purse.

3.—The method of insurance to be controlled by the State.

Boneless Meat.

Large quantities of boneless meat, from which the glands parts of the fat, etc, have been removed, arrive daily from America into this and other cities of this country. Meat arriving in this condition defies inspection, consequently it is quite possible and very probable that in many cases such meat is cut from tuberculous carcases from which the diseased glands have been removed; therefore, as a safeguard against disease, meat should be allowed to arrive in this country only in the form of whole carcases, accompanied by the lungs, liver, and other important organs, and subjected to inspection at the several ports of arrival.

Imported Tripe.

Large quantities of tripe have been condemned and destroyed as being unfit for food, owing to the presence of excessive amounts of boron preservatives. Samples of the condemned tripe taken to the public analyst of this city were found on analysis to contain an average of 138¼ grains of boric acid to each pound of tripe. One sample contained at the rate of 220½ grains of boric acid per pound of tripe.

Thomas Parker, F.R.C.V.S.,
Veterinary Officer,
Chief Inspector of Meat, Provisions, etc.

THE CENTRAL VETERINARY MEDICAL SOCIETY.

The last ordinary meeting of the session was held at 10 Red Lion Square, on July 2nd. Mr. J. Willett, President, in the chair. The following members signed the attendance book: Capt. C. H. H. Jolliffe, Messrs. Geo. Upton, James A. Gosling, A. McCunn, A. L. Butters, W. Perryman, Alexander A. Johnson, A. E. Willett, E. Lionel Stroud, Reg. F. Wall, Fred. G. Samson, R. Porch, N. Almond, G. H. Livesey, Capt. R. C. Moore, James Rowe, Percy S. Howard, A. E. Bayley, W. Roger Clarke, Sydney H. Slocock, W. L. Harrison, Prof. J. Macqueen, and Hugh A. MacCormack, Hon. Sec.; and as visitors: Messrs. Geo. J. Bell and F. G. Doyle, Sydney, N.S.W.

On the proposition of Mr. E. L. Stroud, seconded by Mr. Wall, the minutes of the previous meeting were taken as read and confirmed.

Mr. Charles Roberts wrote regretting his inability to be present.

Mr. GEO. J. BELL, of Wandsworth, and Capt. J. R. STEEVENSON, A.V.C., of Chatham, were nominated for membership.

MORBID SPECIMENS.

Mr. GEORGE UPTON exhibited the hoof of a horse. In working a chaff cutter the animal picked up a nail which penetrated the pedal bone and the front wall of the foot, but for about six weeks there was no acute pain or fever and the horse fed well and was exercised. A little later, there was necrosis of the pedal bone, which began to discharge in front of the hoof.

The PRESIDENT showed a vaginal polypus or tumour removed from a poodle bitch 2½ years old. The animal was brought to the surgery with a history of smelling very badly, and on lifting up the tail the tumour, about two inches in diameter, was seen hanging from the vulva. It was ligatured and snipped off. There was a good recovery.

Prof. ALMOND produced a part of the œsophagus, diaphragm, stomach, and intestines of a Pomeranian, 4 months old, weight 2¾ pounds. The dog had swallowed a large piece of biscuit. On passing a probang a solid body was felt, but could not be moved with safety. The size of the biscuit was nearly as large as the stomach itself. Operative procedure was practically out of the question, the obstruction being in the thoracic portion of œsophagus, but Prof. Almond wished to know the opinion of Fellows whether it would have been safe to use a greater amount of force, or whether they could suggest other means of relief.

Prof. ALMOND asked at what stage of the case the nail was extracted from the foot of the horse.

Mr. UPTON said it was extracted within 24 hours. Referring to Mr. Almond's specimen, he drew attention to the choking of cows through swallowing the placenta, and said that in many cases the use of the probang only wedged the obstruction more tightly.

Mr. A. L. BUTTERS said that taking up nails was not uncommon, but he did not recollect having seen one penetrating the pedal bone and the wall of the foot to the extent shown The most extraordinary thing was that it was not noticed for so long a time. Such a case, of course, was hopeless from the first, but as there was so little pain it was quite justifiable to keep the horse alive.

Mr. A. E. WILLETT, showed a small fatty tumour removed from the lip of a Pomeranian dog, 13 years old, under the influence of morphia and cocaine.

"SOME CLINICAL REMARKS CONCERNING LAMENESS AS AFFECTING THE FORE LIMB IN THE HORSE. DISCUSSION CONTINUED.

Prof. MACQUEEN considered Capt. Jolliffe's paper interesting, instructive, and well expressed, and should be taken as evidence of the improved attention to detail in the Army Veterinary Service, which at one time was called the Lotus-land of veterinary practice. He agreed with the author in regard to the difficulty of diagnosis and treatment, but thought it was a point that ought not to be laboured too much, the more important point being how to improve our capacity to deal with cases of lameness both in regard to diagnosis and treatment. To his mind there were two very useful aids to diagnosis. The first was a good working knowledge of anatomy, and in that connection he often thought there was room for a post-graduate course on surgical anatomy, and he was sure it would pay everyone engaged in horse practice to revise his knowledge of the subject. The student, speaking generally, did not fully appreciate at the right moment the advantage of anatomy, and only studied the subject in order to pass an examination. The institution of a post-graduate course would enable the practitioner to verify his impressions of various parts and to practise dissections that he never thought of while a student. The second aid was method in the examination of the lame horse. He did not quite approve of the method sketched in the paper, believing that the proper procedure was from the foot upwards to the shoulder, and not, as in the essay, from the shoulder to the foot. The first thing was to fix the lame limb, and in cases of cross lameness that might be very difficult, but a good hint was to pay attention to only one leg at a time. Then fix the seat of lameness, and afterwards one might draw upon one's anatomical knowledge to assist in arriving at an opinion regarding the nature of the cause. He thought the essayist was to be commended for his very careful statement on the subject of classification of lameness. But as a working classification that in the paper was nearly useless, because the only classification of lameness of any practical value was the anatomical. Lameness must be classified according to the region affected. In practice the same sort of lameness, owing to varying lesion or degree of injury and susceptibility to pain in different horses, showed great variation in its manifestation, and that was one reason why he thought text-book classification of small value, excepting of course what was termed the anatomical. For instance, there were various manifestions of navicular disease. Some cases were called acute and some chronic. There was great variation in the symptoms of such a case as gathered nail; some horses were only lame for a short time, others permanently, and some had to be destroyed. Classification based upon carrying the leg, inability to support weight, or effect active movement were of little use in practice.

Taking the first question raised by the essayist– how to recognise fracture of the first rib, he was afraid he could give no information on the point. No doubt in some cases radial paralysis was symptomatic of that fracture, but he agreed with the essayist in thinking that loss of power in the extensors of the elbow did not always indicate such fracture He was himself waiting for an opportunity of seeing a case of fracture of the first rib with fibres of the radial nerve embedded in the callus, pinched between the parts of the fracture, or engaged in such a way as to cause compression; until that condition was seen he should remain somewhat sceptical. Strange to say the only parts of the brachial plexus that were immediately related to the first rib were the dorsal roots, which turned round the edge of the rib, and made an impression on its border. The cervical roots of the plexus had no direct connection

with the first rib, yet the nerve believed to be implicated in radial paralysis or costal fracture was largely made up of fibres derived from the cervical portion. Dealing with radial paralysis, apart from fracture of the first rib, he was not one of those who thought that the condition was properly described. It was quite as feasible to believe that the initial lesion of the lameness was muscular, and that extension took place from the muscle to the nerve, not from the nerve to the muscle. The idea of charging nerves with the initial cause of certain lamenesses was a modern one, but he could not believe that the horse was frequently the subject of sudden nerve paralysis. It was now the custom to speak of "shoulder-slip" as supra-scapular paralysis. It was a lameness that appeared more frequently in horses working on land than in horses working on the streets, and the old view was that the uneven tread was responsible to a large extent for the muscular, fatigue that induced the lameness or loss of power. There, again, the initial lesion probably was muscular and what was conveniently described as supra-scapular paralysis was an after-effect. There were fourteen principal nerves arising from the brachial plexus, most of which had some connection with the muscles of the shoulder, arm, and fore-arm, and it seemed rather strange that two of the fourteen should be singled out for a sort of visitation of providence.

With regard to deferred fracture, he thought Mr. Hunting's statement on the subject was correct. The first lesion, or the first change in the injured bone, had sometimes been described as comparable to what happened in a pane of glass when struck by a stone; the bone was starred with a number of lines radiating from a centre. Mr. Hunting's explanation was that the broken portions were not held together by periosteum or any other covering, but the fracture was gradually extended and eventually separated in consequence of movement. That was the explanation of what was commonly called latent or deferred fracture. The essayist's statement with regard to fracture of the pastern he believed to be correct, and immediate positive diagnosis of simple fracture of the pastern was almost impossible. Later on diagnosis could be made with a certain degree of confidence because there were other symptoms present to assist. He agreed with the essayist's remarks regarding the law suit where a veterinary surgeon had to pay for advice given on the street. A veterinary surgeon should never be in a hurry to condemn a horse on the street; unless the bone was protruding through the skin or the fracture was comminuted he ought to withhold diagnosis until he was absolutely certain. Various views were held regarding the effect of a ruptured tendon. If a horse had suffered from chronic strain of the flexor tendons adhesions would exist, usually over an extensive surface; when the tendons were divided as in tenotomy, and the horse was allowed to rise, and the fetlock did not sink, some might infer that cutting the flexor tendons did not permit the fetlock to sink, but an explanation was that the adhesions held the tendons and kept the fetlock in position. In a horse free from disease of the flexor tendons, if the suspensory ligament was cut above its bifurcation the fetlock would sink a little, but it did not reach the ground, more or less sinking to one side would result from cutting one of the branches extending to the sesamoids. Cutting the perforatus between the knee and fetlock would produce no appreciable change in the position of the fetlock, but there would be marked sinking on cutting the perforans. In flexor rupture following neurectomy the perforans gave way, usually at the pastern, a few inches above its insertion. He believed that sinking of the fetlock sometimes occurred without any discoverable lesion of either the suspensory or the flexor tendons. An explanation might be found in what happened in cases of radial paralysis when the elbow sank. In sinking of the fetlock the flexor muscles had undergone some change—had become relaxed and in consequence the fetlock was not well supported.

With regard to shoulder lameness he agreed with the essayist, it was not easy to say what it was, but he thought there was such a thing. Shortening of the stride was due usually to muscular weakness or inability, but it might be due to movements aggravating the pain of the particular lameness. There was no doubt that swinging of the foot was seen in many lamenesses, and it was well marked in that condition called supra-scapular paralysis, and in certain cases of joint disease there would be swinging of the foot. Everyone who had suffered from a stiff knee knew that there was an inclination to throw the foot out in order to get it forward. Swinging the foot was not necessarily a diagnostic symptom of shoulder lameness but it certainly suggested that the cause of lameness existed in the upper region of the limb. He agreed in thinking that splints seldom interfered with tendons, but the possibility could not be denied. Sometimes splints occurred at the back of the shank, under the suspensory ligament. In diagnosing lameness in old horses it was well not to pay too much attention to what appeared to be the obvious cause. An effort should be made to find some other cause, and in the majority of cases one would be found. He could not agree with the essayist's statement concerning the navicular bone. In the fresh state a lesion might be seen on the surface next the tendon, and on boiling the bone no naked-eye lesion might be found, but that should not be accepted as proof that the bone was normal. In nearly every case of navicular disease there was structural change within the bone in addition to the surface lesion.

With regard to cocaine, some persons appeared to think that it was likely to take the place of intelligence, and that all one needed to diagnose lameness was to be armed with a bottle of cocaine and a syringe. He had used cocaine frequently in cases of lameness and had found it rather misleading. There was not sufficient knowledge as to how far the anæsthetic action extended above and below the place of injection. In acute disease of bone injections of cocaine did not always abolish lameness.

Mr. R. Porch said in some cases it was not possible to diagnose fracture of the first rib with certainty; all the diagnostic symptoms might be there, but in many cases there was no fracture. The majority of cases he had come across had been in horses that had simply slipped without going off their legs. He had had cases with all the diagnostic symptoms, dropped elbow, flexed knee, fetlock joint, etc., and after treatment the horse had worked for some four or five years. In one case that had been treated, after some time the horse died and on post-mortem it had been found the rib had been fractured. With regard to deferred fracture, he believed there were such cases usually arising from a kick. Mr. Hunting's explanation was a very feasible one. With regard to the question of how long a horse should be kept in the slings in a suspicious case of fracture, a good deal should depend upon the symptoms. If the horse had been kept in slings for a week or ten days and on being taken out appeared to be going perfectly sound, and there was no enlargement, it might be safe to say that there was no fracture. With regard to fracture of the phalanges, it was a most difficult thing to diagnose unless the bone was smashed. With the fractures usually found in the phalanges, if one waited long enough there was a swelling, a deposit being throw out, and then it might be safely concluded there was a fractured pastern. He agreed with the author that if the bone was splintered very badly the chances of recovery were very remote, but there were many hundreds of horses that had recovered from a simple fracture sufficiently to do years of work. He agreed with the diffi-

culty of diagnosing fracture of the navicular bone unless it was traumatic. Professor Macqueen had mentioned that dividing the perforans, the perforatus tendon, and the suspensory ligament would cause the fetlock to descend, and he could imagine that it would; but by dividing the perforans tendon, which he had done for partially shot-over fetlock joints, the disease was relieved, and there had been no descent of the joint. His experience was that shortening of the stride was usual in the majority of lame horses. The animal wished to relieve the weight as quickly as possible. He believed there were a number of cases of shoulder lameness, and they were very difficult to diagnose. A horse suffering from a corn showed the same action supposed to be due to shoulder lameness. With regard to action in diagnosis, it was very useful but too much reliance should not be placed upon it. He agreed with Prof. Macqueen as to splints, although he would not go quite as far as the Professor. Inspection of the metacarpal bones in a knacker's yard would show an astonishing number with exostosis at the back of the bone, underneath the suspensory ligament, although it was impossible to feel it in many instances during life. No doubt splints did interfere with the tendons. Professor Macqueen had mentioned the value of attention to one leg at a time in locating lameness. His own practice was to look at the horse running away from behind, and look at the two forelegs when he was coming towards him, taking just two legs at a time. With regard to shoulder slip, most of the cases he had been able to trace to azoturia in the front limb. He did not think unevenness of the road had anything to do with it; he remembered Professor Williams mentioned that it was nearly always found in farm horses, and that it was due to the horse walking in the furrow, but in the country he had never seen one he could trace to that cause. With reference to the use of cocaine in fetlock joint lameness he should like to know whether it had been found of benefit when injected just above the fetlock joint. He himself had tried it, but not always with success.

Mr. PERRYMAN said that in fracture of the first rib his experience was that the elbow dropped about the third day after the animal was noticed lame, that was rather an important point of differentiation between a possible fracture and possible paralysis of the nerves. The dropping after that period he inferred was due to the inflammatory exudate being thrown out round the nerves, causing pressure and paralysis. With regard to the exact location of the fracture, he believed it was generally at the neck of the rib. Was that the essayist's opinion? In the early stages of fracture of the rib he had noticed twitching of the pectoral muscles, and thought this was a very important symptom to look for where fracture was suspected. It was very noticeable in the human subject.

He thought there was not a shadow of doubt that some splints caused a great deal of interference with the tendons. One condition he had particularly noticed, the excessive thickening of the check ligament when splint was in that region: the thickening disappearing as time wore on and leaving a clearly defined splint.

Mr. UPTON thought lameness could be divided into lameness due to injury or some disease of the hard structures and lameness due to iniury or disease of soft structures. Cases of lameness with no history were mostly due to bone trouble. He thought horses were taken off the land too early, that they ought not to be worked on hard roads until seven years of age. Some horses in the shire and hackney line would be found throwing out side bones, ring bones, and splints, and unless that constitutional taint was cleared out by breeding or by environment there would always be crippled horses. The tendency to throw out splints he believed was due to some of the rudimentary conditions of the old horse, and it was very necessary to try and breed out the small splint bones, which were a nuisance. He thought some forms of ostitis were of a constitutional type. Taking breeds of horses, such as the long haired horse, with any amount of bone, the question had to be asked, whether it was good bone, bone which was going to last, or bone that was going to throw out splints or side bone or ring bone. In his own district he saw horses bred and brought up on the farm, taken out on the roads to work, and he felt convinced that the right horse was not being bred. It might not be possible to breed a horse with iron bones, but the nearer that could be approximated to the better. With regard to shoulder lameness, he thought most cases were due to injury. In ninety-nine cases out of a hundred there was a wasting in shoulder lameness, but if the horse was put to gentle exercise the muscle made up again. One great trouble about the foot was contraction in shoeing; but if the horse was turned out and the foot expanded he speedily became sound. Captain Jolliffe asked for a definition of foot trouble. His own idea was to tell the client that the horse was "fever footed."

Capt. JOLLIFFE, in reply, observed that Mr. Hunting had said he had contradicted himself because he acknowledged the importance of diagnosis on one page, but said it did not much matter whether the case was diagnosed or not upon another. In the latter statement he was referring entirely to the different varieties of shoulder lameness only.

He was very interested in Mr. Hunting's remarks about deferred fracture, and pleased to hear Prof. Macqueen agree with Mr. Hunting's theory about the occurrence of that injury. This theory was new to him (the essayist). Mr. Hunting had said he could not understand how the stride could be lengthened with a lame limb. To his mind it was apparently lengthened for the reason that the horse took a specially short stride with the sound limb in order to relieve the lame limb of weight as soon as possible.

He entirely agreed with Prof. Macqueen as to the value of a post graduate course on the subject of surgical anatomy. As a student he did not himself appreciate sufficiently the value of anatomy in connection with the diagnosis of lameness.

With regard to Prof. Macqueen's remarks as to the undesirability of commencing with the shoulder and ending with the foot in considering the subject of the paper: this had been done for the purposes of the paper only; it was not the procedure he should advocate in examining a lame horse. He was interested in Professor Macqueen's views concerning the relationshipof muscular and nervous lesions in the causation of lameness. He certainly thought that splints on the posterior surface of the great metacarpal bone must be a fairly common cause of lameness, in view of what Mr. Porch had to say about finding so many cases of it in the knacker's yard.

With regard to horses showing evidence of disease of the synovial surfaces on the inferior aspect of the navicular bone, Prof. Macqueen had said he did not quite understand what was meant. When the horses in question were first destroyed the synovial surfaces were found to show evidence of inflammation, but after the bones had been boiled they appeared to the naked eye normal, both externally and on section. They were not examined microscopically or with a hand-lens.

With regard to the time the horse might be safely removed from slings, in cases of suspected deferred fracture, he understood Mr. Porch's view was that as soon as the horse was trotting sound, and provided there was no local evidence of fracture, he might be safely put to work, and he thought that was an excellent guide. It seemed to be pretty generally agreed that a shortening of the stride was of no value either as a diagnostic feature or as being even suggestive of any particular variety of lameness, and that it might occur in lameness originating in any part of the limb. With regard to ex-

amination for detection of the lame limb, personally he always did as Mr. Porch did. When the horse was going away from him he examined the hind limbs only, and when the horse was coming towards him the fore limbs.

With regard to the result of using cocaine in cases of fetlock lameness, he had not injected it in cases where he had been absolutely certain that the lameness had been in the fetlock. He had used the cocaine in cases where there had been nothing to account for the lameness. He certainly thought if lameness were in the fetlock and cocaine was injected over the plantar nerves at the side of the fetlock it would probably cause a diminution of the lameness. Nobody knew quite how far the effect of cocaine went, but it probably extended some way up the nerve, and presumably anæsthetised the whole of the area below the seat of injection. In cases of uncertainty it was very valuable, because if the horse was suspected of being lame above the elbow, and cocaine was injected in the fetlock and the lameness diminished or disappeared, it would completely negative such suspicion.

With regard to Mr. Perryman's remarks in connection wish fracture of the first rib, the only case of fractured first rib he could recall showed immediate signs of radial paralysis. Muscular twitching had never occurred to him, but he thought it was likely to be rather a useful aid. He agreed with Mr. Upton that there would be very much less lameness in horses if they were not worked until they were much more mature.

On the proposition of Prof. Almond, seconded by Mr. Butters, a hearty vote of thanks was accorded to Captain Jolliffe for his paper.

On the motion of Mr. Perryman, seconded by Mr. Johnson, a vote of thanks was accorded to the exhibitors of morbid specimens.

It being the last meeting of the Session, Mr. Porch proposed a vote of thanks to the President for the manner in which he had conducted the business of the Society during his term of office.

Mr. Upton seconded the motion, which was carried with acclamation.

The PRESIDENT briefly returned thanks and said he should always look upon his year of office with very pleasant recollections. He thanked the members for their support, and especially thanked the Secretary and Treasurer for their assistance in connection with the Society's business.

HUGH A. MACCORMACK, *Hon. Sec.*

LINCOLNSHIRE VETERINARY MEDICAL ASSOCIATION.

The summer meeting was held at the Angel Hotel, Peterborough, on Thursday, June 11. Mr. G. W. B. Dickinson, F.R.C.V.S., Boston, the President, in the chair: also present—Messrs. G. Lockwood, Hon. Sec., Peterborough; R. W. Knowles, Wisbech, Vice-Presidents; R. Bett, Benniworth; T. B. Bindloss, Long Sutton; T. Hicks, Metheringham; A. W. Lalor, Sleaford; H. H. Nichols, Oundle; J. H. Poles, Whittlesea; T. A. Rudkin, Grantham; J. Sheffield, Holbeach; W. K. Townson, Market Deeping.

Visitors: Mr. C. Hartley, junr., Lincoln; Lieut. T. A. Nicholas, A.V.C.

Letters apologising for inability to attend were received from Messrs. F. L. Gooch, C. Hartley, W. W. Grasby, T. Holmes, H. C. Taylor, E. W. Parks, J. W. Gresswell, and A. Lemon.

Mr. LOCKWOOD also read other correspondence he had received from various societies connected with the profession.

DEATH OF EX-PRESIDENT.

The death of ex-president, Mr. W. R. Turner, M.R.C.V.S., was reported with regret by the Hon. Sec.

The PRESIDENT moved a vote of condolence with the relatives. Mr. Turner, he said, was connected with the Association for many years; he had been very true to his profession, and he would be very much missed.

Mr. LOCKWOOD said when he received the letter he wrote expressing the Association's deep sympathy. The vote of condolence was passed in silence.

CHAS. HARTLEY, jr., was proposed for election as member of Association by Mr. G. Lockwood, seconded by Mr. T. Hicks. Carried.

The HON. SEC. and TREASURER produced the statement of accounts, showing a satisfactory balance at the bank.

BOWSER *v.* SHEFFIELD.

The PRESIDENT brought before the meeting the case of Bowser *v.* Sheffield at the Boston County Court, in which one of the members of the Association was mulct in heavy damages and costs for alleged inattention to a farmer's mare. The President described the treatment adopted by Mr. Sheffield, defended him from the charge made against him, and that Mr. Sheffield was not responsible for its decease. He protested against brother members of the profession giving evidence of the character they did, and especially that a member of the Council of the Royal College should have legally opposed one of their members. Unfortunately there was no appeal against the decision of the County Court Judge, but he felt that it was one of the gravest injustices that could befall a member of the profession, and that none of them would be safe if they did not enter their protest in the matter. He suggested that they show their sympathy to Mr. Sheffield by initiating a fund to indemnify him his costs.

A long discussion ensued in which some strong opinions were expressed as to the course adopted on behalf of the plaintiff to obtain a case, and eventually, on the motion of Mr. T. A. Rudkin, seconded by Mr. H. H. Nichols, the following resolution was unanimously adopted:

"This Society, noting with regret that members of the profession gave evidence against a *confrère*, and especially that a Member of the Council of the Royal College legally opposed this member, calls upon the Council of the Royal College to take such steps as will stop such unprofessional conduct in future."

After further discussion, it was proposed by Mr. R. W. Knowles, and seconded by Mr. T. B. Bindloss: "That the members of the Lincolnshire Veterinary Medical Association sympathise with Mr. Sheffield on the result of his recent litigation and wish to express their confidence in his professional abilities."

This was also carried, and it was decided, by way of giving practical effect to the resolution, to at once open a Sheffield Defence Fund, all the members present subscribing.

OPERABLE DISEASES OF THE EYE AND EYELIDS OF DOGS.

By E. LIONEL E. STROUD, F.R.C.V.S.

Before proceeding to the subject-matter of this paper, I feel I cannot allow this opportunity to pass without expressing to you how deeply honoured I am by your kind invitation to come amongst you to-day and place before you that which I trust you will find of interest. I need hardly assure you that it gave me the greatest possible pleasure to accede to your worthy president's request, my only regret being that I am unable to bring before you a subject of more general interest to you, whose practices, I understand, are mostly situated in the

country; but as many of the conditions which I shall mention to-day are frequently met with in sporting dogs, I ventured to choose the subject of "Operable Diseases of the Eye and Eyelids of Dogs," partly because of the reason I have just mentioned, and partly because this subject has not received that attention at the hands of the veterinary surgeon its importance warrants, and if I am the means of stimulating increased interest in what is a very fascinating study, I shall feel amply repaid.

I will ask you to bear with me for a few moments while I briefly describe the anatomy of the organ of vision and its appendages. In appearance the globe of the eye is spherical in form, with a segment of a smaller sphere on its anterior surface. It consists of a membranous sac, containing transparent humours, and is attached to the orbit by muscles and the optic nerve, whilst a cushion of fat is interposed between it and the bones of the orbital cavity.

The membranous sac is composed of three coats—an external or sclerotic, middle or choroid, and an inner or retina. The cornea is the segment of the smaller sphere is just now mentioned, and fits into the anterior opening of the scleroid coat in a somewhat similar manner to which a watch glass does in the groove in its case. It is composed of two coats—an outer continuous with the sclerotic, and an inner, elastic and transparent membrane, which retains its transparency long after the outer has become opaque.

There are three so-called humours of the eye; aqueous, vitreous, and lens. Roughly speaking, the aqueous fills up the cavity in front of the lens and is watery in character, whilst the vitreous is jelly-like in consistency and occupies the space behind the lens, in all about four-fifths of the interior of the globe. Immediately in front of the lens is a thin curtain (the iris) pierced in the centre by an elliptical opening, the pupil.

The muscles of the eye are seven in number, five of which are straight and two oblique. The straight ones consist of the posterior or retractor, the superior or levator, the inferior or depressor, and the external and internal, which draw the eye either outwards or inwards. The superior oblique elevates and rotates the eyeball, whilst the inferior depresses and turns the eye inward.

With regard to the appendages of the eye, the only parts I wish to draw your attention to are the "tarsal cartilages," which are two cartilaginous plates forming the solid framework of the free border of the eyelids: the Meibomian glands, situated between the tarsal cartilages and the conjunctiva; and the Harderian glands which are to be found in the inner canthus immediately under the membrana nictitans.

Now, with your permission, gentlemen, I will first deal with the operable diseases of the eyeball, and then with those of the appendages.

Accidents.—Our canine friends are probably more liable to injury of the ocular globe than any of the other domesticated animals, though in the majority of cases the wound is not deep, and readily heals if kept clean and is dressed with a simple antiseptic lotion, boracic acid 5 gr. to an ounce of distilled water answering admirably. Sometimes, however, the cornea is punctured, when not infrequently the iris protrudes, and this may be distinguished by a round dark-coloured protrusion in the cornea, often accompanied by an escape of the aqueous humour. If attended to promptly the iris may be returned by means of a probe, the eye dressed with an antiseptic and bandaged. If this proves unsuccessful the protruding portion may be excised and the before-mentioned treatment adopted. A fistula is not an uncommon sequel to punctured wounds of the cornea; it should be cauterized with argent. nit., and the eye fairly tightly bandaged.

Foreign bodies may consist of particles of dust, seeds, pieces of flint, small shot, etc., a considerable irritation is frequently set up if the cause is not quickly removed. Whether the foreign body lies superficially in the epithelium, is imbedded in the deeper structures, or lies in the interior of the eye, that organ as well as the instruments to be used must be rendered thoroughly aseptic and the eye cocainized before attempting treatment. The lids should be gently forced apart by the finger and thumb or by a speculum, the eye lubricated with a few drops of castor-oil and the offending body, if lying on the surface, removed by forceps or cataract needle. If the foreign body has penetrated the deeper layers of the cornea it has to be dug out, a cataract knife being very useful for this purpose. A fine groove is made just above and below the foreign body, the latter being gouged out. In cases where the foreign body protrudes into the anterior chamber, it is necessary to pass the cataract knife through the cornea, exert pressure behind, so as to give a firm basis on which to work, to push the foreign body forward so that it can be seized by forceps and removed. Where the foreign body is lodged in the interior chamber of the eye, an incision is made at the lower margin of the cornea and the aqueous humour allowed to escape. If the object does not escape with the humour an iris forceps should be inserted through the opening and the shot, or whatever it is, seized and removed. It is necessary in these cases to bind up the eye, using gentle pressure, and to keep the patient in a darkened room for about a week afterwards. Foreign bodies within the eye, unless removed at once, quickly produce violent inflammatory reaction, and if this is set up it is better to remove the eye entirely, otherwise sympathetic ophthalmitis will probable ensue.

One of the most common affections to which dogs are subject is cataract, and especially so is this the case in aged animals, though I have seen it in puppies a few weeks old and in young dogs of varying ages. When seen in puppies there is no doubt that the disease is congenital and usually affects both eyes, the opacity probably being about the size of a pin's head; but by the time the patient is 12 month's old the whole of the lens will often be found to be implicated. Unfortunately, in our patients operating on cataracts does not give such beneficial results as is the case in the human subject; but a dog that is quite blind can be made to see slightly, though without the aid of spectacles everything appears to him upside down. We are therefore not so very frequently called upon to perform this operation, but it is one in which every veterinary surgeon who goes in for canine practice should be conversant with. One of two methods is usually employed, discission and extraction. Discission, which means the tearing of the capsule of the lens so as to bring the aqueous humour into contact with the lenticular fibres of the lens, causing them to swell and to be gradually absorbed, is chiefly employed in cases of cataract of young dogs. The instruments required are a speculum, fixation forceps, cataract knife, and a cystotome. A general anæsthetic is advisable, and after the pupil has been dilated with atropine the eye is rendered thoroughly aseptic and the speculum inserted to keep the lids open. The eye is then fixed with the forceps, the knife passed through the margin of the cornea, either at its inferior edge or at the side into the anterior chamber; it is then very gradually withdrawn, and the cystotome inserted in its place. This should be passed to the further side of the lens, and drawn right across it just so as to penetrate the capsule; two or three scratches may be made before withdrawing the cystotome. Atropine is again applied, the eye bandaged, and the dog kept in the dark. The iris should be kept well under the influence of atropine until the absorption of the lens is complete, that is, it should be instilled into the eye twice a day. It may be necessary to repeat the operation two or three times at intervals if the absorption is very slow.

Extraction of the lens is carried out on somewhat similar lines as discission, that is to say, up to as far as

the scratching of the capsule of the lens with the cystotome; this instrument is then withdrawn, and a cataract spoon or curette introduced through the opening. Pressure is then exerted on the eyeball with the finger and thumb, and with the aid of the curette the lens is gradually forced out of the opening in the cornea. Care must be taken that the iris is not prolapsed; if it is, it must be carefully returned or snipped off with scissors. The after-treatment consists of keeping the eye bandaged with an antiseptic dressing changed two or three times a day, and the dog kept in a darkened kennel for about three weeks.

Another method of removing the lens is by what is known as the flap operation. This consists of passing a knife right through the cornea from one side to the other and cutting upwards, thus allowing the upper part of the cornea to fall back. In this case eserine should be used, otherwise there is great liability to luxation of the iris. This method of operating is not advisable in our patients, except in very old animals with hard or senile cataracts, because it is difficult to get union of the incised cornea, a slight movement on the part of the patient being sufficient to reopen the wound; but this may to some extent be got over by keeping the dog under the influence of morphia for a few days. It is very necessary, too, when dressing the eye after operating, to see that the incised edges are correctly brought together.

The next operation to which I wish to direct your attention is one which we are frequently called upon to perform, and that is excision of the eyeball itself. This may be rendered necessary from a variety of causes, such as severe injury to the eye, diseased conditions, growths, etc. There are two methods of operating, *enucleation* and *evisceration*.

Enucleation, or complete excision of the globe of the eye, is the one most commonly performed in our patients. This operation is a very painful one, and therefore the animal should in all such cases be put under a general anæsthetic. The eyeball having been thoroughly aseptic-ised and the speculum introduced, it is seized by the fixation forceps, or a needle and silk passed right through to hold it by; the conjunctiva is incised along its upper border, the eye drawn down, the recti muscles and optic nerve and vessels divided, and lastly the conjunctiva on the lower border is cut. As little as possible should be left in the orbital cavity, which must now be plugged with boric wool, or a styptic solution on wool, the after-treatment being on ordinary antiseptic lines, with a somewhat firm bandage.

Evisceration of the eyeball, which was introduced by Graefe, of Halle, has not proved so successful in animals as in the human subject. The patient is prepared as for enucleation, and the spring speculum placed in position. A Graefe's knife is introduced into the cornea at its junction with the scleroid, passed right through to the further side of the cornea and the upper half divided; the rest of the cornea is removed by scissors. The contents of the globe are removed by the curette, care being taken that the choroid is carefully peeled from the sclerotic in a backward direction and removed unbroken. The casing of the sclerotic is then plugged with gauze, which dressing must be renewed twice a day, the part at the same time being freely irrigated with an antiseptic. The result should be a freely movable stump for the application of a false eye. I should be glad to have your experience, gentlemen, on this method of operation, as unfortunately I have not been successful; my experience being that the sclerotic membrane sloughs away, necessitating extirpation of the remaining portions of the eyeball.

Although somewhat deviating from the order in which I have arranged the various operations, it would be a convenience to refer here to the application of artificial eyes. These add very considerably to the general appearance of those dogs which have had the eye eviscerated or removed, and appearance is a great desideratum in this class of patient. They may be obtained made of various materials—glass, horn or celluloid—and personally I prefer either of the two latter. Solid eyes are not to be recommended, but convex ones with a hollow posterior surface are best, the reason being that extensive granulations take place after excision of the eyeball, and a hollow shell causes very little irritation. Of course, if evisceration has been performed successfully, a solid eye is a necessity. In either case the false eye should fit most accurately, and must be removed every night; particularly must precautions be taken to keep the part antiseptic. Two or three months should ensue before the false eye is fitted, thus allowing all inflammation to subside and complete healing to take place. If a hollow eye is used, all that is necessary to place it in position is for the upper lid to be pulled outwards and raised a little, the shell pushed upwards beneath it, the lower lid drawn down, and then upwards over the lower border of the false eye. To remove, pull down lower lid, and pass a probe or scoop under lower border of shell, which is thus lifted out.

Glaucoma, from the Greek, signifies sea green, is the name applied to a disease of the eyeball in which the chief symptom is increased intra-ocular tension (hardness of the eyeball), due to over-fulness of the globe (hydrops oculi), the increase in the amount of fluid being confined to the anterior chamber. The eyesight is impaired or may be lost altogether, the cornea bulges out and so is liable to injury, and its surface takes on a peculiar steamy or breathed-on appearance, and both the aqueous and vitreous humours become opaque. In our patients this process is nearly always gradual, and pain is usually absent.

Three methods of operating are open to the surgeon: iridectomy, tapping of the cornea, or excision of the eyeball. The two former I shall come to in due course, and the latter has been already referred to.

Prolapse of the eyeball usually results from blows or bites, the prognosis being dependent upon the circumstances and condition of the organ. If the injury is recent, and the muscles and eyeball are not torn, the globe may be returned to its socket in the following manner: first thoroughly cleanse the parts with a simple antiseptic, for which purpose a boric acid solution of 5 gr. to the ounce of water is much to be preferred; the assistant then seizes the eyelids with forceps and pulls them as much apart as possible, whilst the operator pushes the eyeball back gently but firmly into the orbital cavity. If any difficulty is experienced in returning the globe the external canthus may be incised to a sufficient extent to allow of easy reduction, and one or two stitches will bring the incised portion together. I do not agree with stitching the eyelids together to keep the ball in position, as I have found such procedure give rise to very great pain and swelling; rather do I recommend a moderately firm bandage or keeping the patient under morphia for two or three days.

Iridectomy is chiefly resorted to in canine practice to relieve high intra-ocular tension, and for the removal of growths or foreign bodies in the iris. The patient having been put under a general anæsthetic and the eye thoroughly antisepticised, the speculum is placed in position and the eyeball seized at its lower margin with the fixation forceps. Graefe's knife is then introduced through the upper portion of the cornea close to its junction with the scleroid, and passed into the anterior chamber parallel with the iris; the point of the blade is then directed towards the posterior part of the cornea and the knife very slowly withdrawn. The iris forceps is introduced through the opening and kept closed until the pupillary margin is reached, when it is opened as far as the corneal incision will allow and a portion of the iris seized and drawn out through the opening, the ex-

posed portion being snipped off with scissors. The portions of the iris remaining between the lips of the wound must be carefully pushed back into their places by means of a spatula or probe. The after-treatment simply consists in instilling a boracic collyrium into the eye two or three times a day, and atropine applied every other day.

In the treatment of glaucoma more of the iris must be incised than is usually necessary in other conditions; therefore the incision should be as far back in the corneal sclerotic margin as will just allow the knife to enter the anterior chamber. This will permit of a large portion of the iris being removed, one-fifth of the circumference being usually necessary, and it should be incised as close to the root of the iris as possible.

Paracentesis, tapping, or puncture of the cornea affords great relief in certain conditions, especially those throwing great tension on the eyeball. In cases of corneal ulcers, particularly those showing a tendency to perforation, paracentesis through the floor of the ulcer is strongly to be recommended. In these cases the pupil should have been brought well under the influence of ererine before operating, otherwise there is great liability to prolapse of the iris.

The only instruments necessary are a spring speculum, a Graefe's cataract knife, and fixation forceps. The eye is cocacainized, the speculum placed in position, and the globe fixed with the forceps. The knife is then inserted at the lower margin of the cornea and passed obliquely upwards for a short distance; it is now very slowly withdrawn until the point of the knife is between the edges of the wound, and it should be kept there until sufficient of the humour has escaped, which will be indicated by a flattened appearance of the cornea. There is no danger in frequently repeating the operation, as the aqueous humour lost is quickly replaced, and the wound soon heals under ordinary antiseptic precautions.

Another condition in which tapping of the cornea is beneficial is keratoconus or conical cornea. Here we find an elongation of the cornea, the latter being altered in shape to that of a cone, with the apex extremely thin. No opacity of the cornea is present. The operation, which, of course, is performed with the object of flattening the cornea, is carried out exactly as I have just described, with the exception that the incision is made just below the lower edge of the conical portion. This should be repeated frequently for a week or ten days, a moderately tight bandage being worn the whole time.

Deep Scleritis.—Here we have inflammation involving the deeper layer of the front of the eye, leading to changes, thinning and softening, of the scleral tissue, with consequent distension of it. The result of this is a bulging (staphyloma) of the anterior part of the eyeball. This condition very frequently follows debilitating diseases, especially distemper, and, unless promptly treated, often results in the loss of the eye itself. Surgical treatment consists of ligaturing the staphyloma with very fine silk, and relieving the tension by tapping the cornea. After all inflammation has subsided an iridectomy often materially helps the sight.

I pass on now to the more common affections of the appendages of the eyeball calling for surgical interference.

Injuries and wounds are very frequent, and every endeavour should be made to save as much of the skin and tissue as possible. On no account should living skin be removed, but the raw edges of the wound should be sutured, and it will be found that they readily heal. In some breeds of dogs, especially sporting dogs, clefts or fissures in the eyelids (coloboma), somewhat simulating the appearance of hare-lip, are not unfrequently met with, and are more or less unsightly. The edges of the clefts should be snipped off with scissors, and the raw surfaces then brought into apposition by means of twisted sutures.

Meibomian or tarsal Cysts are sometimes met with in canine practice. This cyst is probably a granuloma in connection with a Meibomian gland, which gradually enlarges, causing a very hard swelling in the lid varying in size from a hemp-seed to a hazel-nut. There are two methods of operating, one by opening on to the swelling through the conjunctiva, then thoroughly removing all the contents by means of a curette. There is one drawback to this method of procedure, and that is that if a small portion of the tumour be left behind it will grow again. A more satisfactory method is to excise the growth, and this may be done either through the skin or the conjunctiva; in either case a triangular piece, including the cyst, is excised, the base of the triangle being at the free edge of the lid. If this operation is performed through the skin, the edges of the wound should be brought together by sutures, though these are not admissible when the incision is made through the conjunctiva. The resulting wound in either case heals very rapidly.

Ankyloblepharon, or the unition of the upper and lower eyelids, either partially or completely, is usually congenital in carnivora, though it may be caused by injuries or disease. In partial ankyloblepharon a director is carefully passed into the opening between the lids, pushed underneath the line of junction as far as is necessary, and the lids separated with scissors or probe-pointed bistoury. The edges of the lids should be frequently smeared with vaseline or boric ointment to prevent them adhering.

In complete unition a small opening must be made, preferably at the outer canthus, for the admission of the director, and the operation proceeded with as just described.

Symblepharon, which is the adhering of one or both eyelids to the eyeball, usually results from burns of the conjunctiva by fire, acids or lime. It may also result from disease, such as dermoid growths on the cornea. Treatment consists of carefully dissecting the conjunctiva from the cornea, and, if due to growth, these must be removed. Very great care is necessary in excising growths on the cornea in order to avoid rupturing the part. Frequent applications of boracic ointment between the divided surfaces is necessary, otherwise re-adhesion will probably take place.

Districhiasis and Trichiasis.—The former condition consists of a row of eyelashes usually turned inwards along the intermarginal portion of the lid in addition to the normal row, whilst the latter indicates a false direction given to the true cilia. Both conditions may be coexistent, and frequently entropium is present as well. If allowed to remain, the hairs, by rubbing on the cornea, cause opacity and even ulceration.

The only reliable remedy is to excise the ciliary margin containing the offending hairs, though extraction of the false cilia by pulling them out has been tried; this, however, affords only temporary relief, for the hairs grow again. In performing the former operation a fine knife is passed into the intermarginal region and the lid divided into two layers, the upper containing the integument with the hair bulbs; a V-shaped incision in the skin of the lid is next made, and the whole flap excised, the wound afterwards being treated with the usual antiseptics.

Entropium or eversion of the eyelid is the term given to that condition in which the eyelid itself is turned inwards, so that the lid is directed towards the eyeball and lashes come in contact with the cornea, causing inflammation, ulceration and sometimes suppuration. Entropium is a very common affection in dogs, especially toy-breeds, pomeranians in my experience suffering more frequently than any other variety, and in the majority of

cases in the upper eyelids only, both being usually affected. I believe this condition is in the majority of cases congenital, though, naturally, wounds and burns may bring it about.

Various methods of operation have been suggested, but in my experience there is only one reliable one, and that is excision of a portion of the cutaneous membrane from the eyelid; it is, moreover, an operation that can be performed speedily and satisfactorily.

The patient is fixed on the operating table in the abdominal position, and the hair removed from the lid as closely as possible, which is then prepared in the usual way for operation, that is, it is washed with ether-soap and an antiseptic; it is then cocainised, and, unless the patient is a puppy, a general anæsthetic is advisable, or, in my opinion, a far better and safer method is to give a hypodermic injection of morphia about an hour before proceeding to operate.

All being ready, a piece of skin near the free border of the affected lid is picked up with forceps, and an elliptical piece removed with a pair of curved scissors, care being taken that skin only is excised. The parts are parts are brought into apposition by silk or horse-hair sutures, and collodion applied. I find sutures of horse-hair to answer best in puppies of the toy breeds, and that is what I always use. The patient must be watched to prevent rubbing of the part, but, as a rule, union takes place by first intention and there is no irritation. It is a matter of practice to be able to judge to a nicety just how much skin to remove; but it is better to take a little too much than not enough.

Hobday describes an operation for entropium which may possibly, in some cases, be more advantageous than the one just described. It consists in slitting the outer canthus (if necessary, the inner as well) and pulling the tarsal cartilage of the deformed lid outwards away from the eyeball and cutting off the projecting piece. It is said to have a very beneficial effect in slight cases, but I have never tried this method myself, and shall be glad to know the experience of any of you here if you have used this method.

The opposite condition to entropium is that to which the term *Ectropium* has been given. It may arise from too much skin having been excised in the operation for entropium, or from burns, bites (cicatricial contraction) or tumefaction of the conjunctiva. Gray mentions this condition as being seen in bulldogs and due to a thickening of the conjunctiva from a granular condition of the inner surface of the lids, and also of the membrana nictitans.

It is not nearly so frequently met with as the opposite condition, and I have not come across any evidence as to whether this affection is congenital or not, though some point out that certain breeds always have their eyelids ectropic, especially bloodhounds and St. Bernards. This does not prove, however, that in those breeds that are not naturally affected in this way this deformity is congenital, and I have never come across a litter of pups suffering from ectropium, though it is not at all uncommon to find a whole litter affected with entropium.

Various means may be adopted to remedy this defect. As a rule it is only the lower eyelid that is affected. Excision of the conjunctiva has proved successful in some cases, as much as is necessary being removed and the edges of the resulting wound sutured.

Another method is, by dividing the outer canthus with a pair of strong scissors. The lid is then seized and stretched sufficiently outwards, parallel to the margin of the other lid, so as to bring it into its normal position; the portion overlapping at the external canthus is snipped off. The new outer extremity of the affected lid is brought into apposition with the healthy lid and the two sutured together with a twisted suture; the rest of the divided portion is stitched together with silk. I have had very favourable results with this operation.

A condition which we are frequently called upon to treat arises from a *tumefaction of the Harderian gland*, which, becoming enlarged, forces its way from under the membrana nictitans and appears in the inner corner of the eye as a reddish tumour varying in size from a pea to a small marble. This has frequently been described as a misplaced orbital gland, but in reality is an adenomatous enlargement and dislocation of the Harderian gland. Removal is easy. After cocainising, the gland is seized with forceps and cut off with scissors as far back as possible. Hæmorrhage is slight, and the only after-treatment necessary is to use a boracic acid collyrium.

Frequently during the course of a debilitating disease the membrana nictitans will be found to protrude some way over the front of the cornea, though, of course, other causes may lead to the same condition. It has never been my practice to excise the membrane except in cases of actual disease, because I consider the operation in ninety-nine cases out of a hundred to be unnecessary, the performance of which in those circumstances amounts to nothing less than cruelty, as it deprives the poor animal of the only means provided by Nature for the removal of particles of dust, etc., from the cornea. One has only to remember for one moment how painful even a very small foreign body is in one's own eye to realise the discomfort and actual pain that must be endured by the dog that has been the victim of the loss of the membrana nictitans. Disease or growths of this curtain are extremely rare, though when such a condition does arise the only treatment advisable is often excision.

This is performed as follows: The eye having been cocainised, a fine needle and silk thread are passed through the membrane to lift it up by, and with a fine pair of curved scissors as much is removed as possible. There is very little bleeding, and the only after-treatment necessary is to apply a boracic collyrium for a few days; if there should be a little discharge from the eye after a few days, ½ gr. of sulphate of zinc added to each ounce of boracic lotion will usually effect a cure.

Strabismus or squint, as its name implies, indicates that the visual axis of the eyes does not meet at the point fixed. It arises from over-action or from paralysis of one of the muscles, also from injuries, brain disease and cerebral tumours, but in cases arising from these two latter causes the head is held on one side. It is very often congenital in dogs and usually convergent, both eyes being affected, though all degrees, from a very slight squint of one eye to complete strabismus of both, are to be met with. Surgical interference rarely effects a cure, th ugh the affection may be considerably improved by an operation. Of course when arising from cerebral trouble, operating is not to be advised, but the case treated medicinally. Each case must be taken on its own merits, and if an operation is deemed advisable a guarded prognosis should be given, as not infrequently only a temporary improvement results.

The operation is called *tenotomy*, and consists in dividing the affected muscle close to the globe of the eye. The patient should be put under a general anæsthetic and laid on the table with the eye to be operated upon uppermost. The speculum is applied, the conjunctiva over the insertion of the muscle seized with forceps, and incised with scissors. When a sufficient opening has been made, the strabismus hook is passed through the opening until the edge of the muscle is felt; the point of the hook is then passed under the muscle, and when the whole muscle lies on the hook the latter is drawn up as close to the muscular insertion on the sclerotic as possible, the muscle itself being divided with the scissors. Care must be taken that the whole of the muscle is divided—any strands left should be sought

for with the hook and incised. The only after-treatment necessary is to apply an antiseptic collyrium for a few days.

This brings me to an end of the more frequently met with diseases of the eye that can be rectified by the surgeon, but before I sit down I should like to say a few words upon one or two points specially applicable to this subject.

The first is with regard to the *examination of the eye*, and in this respect systematic methods are even more important than in other examinations, because the objects to be sought for are often so minute as not to be readily detected, whilst the symptoms they give rise to are often very severe, and apparently out of all proportion to the cause. All parts visible to the naked eye should be examined by it, and the cornea should be scrutinised not only from the front, but sideways, for often a lesion on its surface or a small foreign body embedded in it can only be seen from the side. Cocaine is useful if there is much pain, and is often indispensable for a thorough examination. The deeper parts of the eyeball can only be seen by the aid of the ophthalmoscope, and when this instrument is employed a few drops of a solution of atropine to enlarge the pupil will be found of great assistance.

An operating table is, of course, a great advantage, and special attention must be taken to render the seat of operation, instruments, dressings and hands thoroughly aseptic.

With regard to the choice of a general anæsthetic, either chloroform, ether, or the A.C.E. mixture may be used, though personally I have almost discarded all three in favour of morphia, which, though more of a narcotic than an anæsthetic, gives the same result without the danger of a fatal collapse, as is sometimes the case when chloroform is used. If the dog is well under the influence of morphia, and a local anæsthetic applied to the part to be operated upon, the operation may be performed absolutely painlessly. Even should the patient give a wince when the incision or division is made, it is only momentary, and he immediately drops off to sleep again. It must not be forgotten, however, that morphia has an antagonistic effect to atropine, and that, therefore, when operating for cataract, it is advisable to combine atropine with the morphia, and also to instil a solution of atropine into the eye. In cases of extirpation of the eyeball it is impossible to render the deeper parts insensible to pain by local anæsthetics; it is therefore advisable in such cases to give a few whiffs of chloroform after the patient is under the morphia. A hypodermic injection of morphia, or morphia and atropine combined, into the back produces complete narcosis in about three-quarters of a hour and lasts for some considerable time. The dose varies from 1-8 gr. to 1 gr. of the sulphate, and, if combined with atropine sulphate, 1-200 to 1-50 of the latter may be added.

Of the local anæsthetics, cocaine and eucaine are the ones usually employed, the former in a 4 per cent. solution and the latter 2 per cent. Holocaine is another local anæsthetic claimed to be especially useful in ophthalmic operations, as it is more powerful and efficient than either of the others, can be sterilised without decomposition, and is an antiseptic; it must not, however, be used hypodermically, as it is much more poisonous than cocaine, resembling strychnia in its action. It should be used in the strength of a 1 per cent. solution.

Atropine is a very useful adjunct in some operations on the eye. It is a pupil dilator (mydriatic), and is best used as a ½ to 2 per cent. solution, the sulphate being the salt employed. To get the full effect of the drug the solution should be dropped into the eye drop by drop, allowing two or three minutes between each drop, and if cocaine is afterwards employed, extreme dilation of the pupil will be obtained. Atropine paralyses the sphincter pupillæ and stimulates the dilator, but it is not certain how cocaine helps.

Eserine sulphate is a pupil contractor (myotic), and acts by stimulating the endings of the third nerve in the sphincter pupillæ. It is to be used as ½ per cent. solution.

I have already referred to the use of antiseptics and collyriums, and I would like here to specially lay stress upon the importance of using weak solutions of simple non-irritating drugs. Personally, I rarely use anything else than a solution of boracic acid 5 gr. to the ounce in the treatment after operating, though I certainly favour a 1-2000 solution of chinosol in the preparation of the eye before, and also during the operation. In my opinion it is the greatest mistake possible to use strong solutions in ophthalmic cases.

I cannot conclude without just a word regarding the general treatment of the patient. Many operators favour eye-caps or bandages, but in my experience they cause irritation and consequent scratching on the part of the patient, and therefore I never make use of them except in those cases where some pressure is essential. I find that by keeping the dogs in a darkened room without any bandaging I get far better results.

I regret that the time at my disposal has not allowed me to prepare a longer paper, but I have endeavoured to bring to your notice just those conditions most frequently met with in everyday practice; and though my views may not meet with the approval of all of you; I trust that what I have said has been of interest, and that we may all be gainers by the discussion, for interchange of ideas is one of the greatest and most successful of teachers.

Discussion.

Mr. R. W. Knowles moved a vote of thanks to Mr. Stroud for his able paper, and said that in his presidential capacity two years ago he pointed out how possible it was for country practitioners to cultivate a canine practice. Both for their canine and feline friends their services might be requisitioned.

Mr. Bett seconded the motion, and said that Mr. Stroud had not mentioned whether in removing an eye he should remove the membrana nictitans. How long did a dog keep under chloroform? How should the anæsthetic be administered? Again, had Mr. Stroud seen paralysis of the optic nerve? He had a horse suffering from a mild form of influenza. The animal was totally blind, the iris was slightly dilated, he could see nothing. He put it down to paralysis of the optic nerve.

Mr. Rudkin added his thanks, and said that unfortunately veterinary surgeons did not get so many canine cases in the country as in the town. He had found Hobday's muzzle of great assistance.

The President was interested in the description of entropium and ectropium, and he admitted that the latter was uncommon, but he had seen it produced in collies as a result of in-breeding. But you could not keep on in-breeding without imperilling the animal. He (Mr. Dickinson) told an owner "If you abuse nature's instincts you must get some freaks." With regard to strabismus, a lady brought to him a little pug dog which was so affected in both eyes. It would also lift up its hind quarters and walk on its fore legs. He found the bitch was pregnant. As soon as labour passed off squint disappeared, and the performances of the animal ceased.

Mr. Stroud, replying on the discussion, thanked them for their very friendly and happy criticisms. He certainly advised in giving an anæsthetic to give morphia. If three-quarters of an hour was the time for operating, ½ or ¾ of a grain of morphia was the dose. In reply to Mr. Bett's question, should he remove the membrana nictitans, generally he should. The only

reason for it was dogs had some means of removing a foreign substance from the cornea. Generally remove the retractor and there was nothing to place the membrana nictitans forward. It was, as he said, a little ledge for a false eye. He administered chloroform on a duster or sponge, holding it in front of the dog's nose and letting him take it naturally. He thought he agreed with Mr. Bett that a paralytic optic could be produced by influenza. He agreed that the case of entropium and ectropium in collies was due to in-breeding, and no doubt other infirmities were due to the same cause.

The PRESIDENT: Yes, and sterility.

Mr. STROUD: In pregnancy paralysis of the eye is not uncommon. It is uncommon for pugs to walk on their forelegs.

A pleasant and informative discussion then closed.

MR. SHEFFIELD'S THANKS.

Mr. SHEFFIELD said he begged to thank the members very sincerely for their sympathy and the kind remarks they had made that day anent his recent misfortune. He thought when the report of the meeting appeared in the papers it might have a little beneficial effect in his district. (Applause.)

Mr. RUDKIN said he hoped Mr. Stroud would come again, and that gentleman acknowledged the compliment.

Mr. BETTS and Mr. Hicks moved and seconded a vote of thanks to the President, and this having been accorded an adjournment was made for tea *à la fourchette*, this concluded a successful business meeting and fraternal reunion.

Sheep Dipping in Skye—Additional Inspector.

At a meeting of the Executive Committee of the Local Authority of Inverness-shire on Friday, July 10, a letter was submitted from the Board of Agriculture as to appointing additional veterinary inspectors for Skye and the Outer Islands, as was done last year. The Mackintosh wrote suggesting that as it seemed to be now known that prosecution will follow detection, it might be sufficient to appoint one additional inspector for the Outer Islands and Skye instead of two as formerly. The Chairman moved that an additional inspector be appointed. Major Fraser-Tytler seconded, and suggested that a prosecution should be instructed in every case detected. On the recommendation of Mr. Logan, V.S. it was unanimously agreed to appoint Mr. James George Cattell to the post at a salary of £18 a month with travelling expenses not exceeding £12 per month. The Inspector will reside at Lochmaddy, and the appointment is to extend from August 1st to November 15th.—*The Northern Chronicle.*

Bowser v. Sheffield.

Dear Sir,

The following are additional amounts to the Fund to assist in defraying the expenses pf the trial in this case —no appeal being possible (*Vet. Record*, June 20, p. 916).

	£	s.	d.
Mr. G. Watkins, Mareham-le-Fen		10	6
Prof. J. Macqueen, R.V. Coll.	1	1	0
Mr. J. Mackinder, Peterborough	1	1	0
W. L. Watts, Billingborough	1	1	0
C. Hartley, Lincoln	1	1	0
H. C. Taylor, Caistor		10	0

Subscriptions to this Fund come in but slowly, and I shall be pleased to receive and acknowledge subscriptions from all who are in sympathy with Mr. Sheffield.

—Yours faithfully,

G. LOCKWOOD, Hon. Sec.

Park House, Westgate,
Peterborough, July 15.

DISEASES OF ANIMALS ACTS 1894 TO 1903. SUMMARY OF RETURNS.

Period.		Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Rabies. Cases Confirmed.		Sheep Scab.	Swine Fever	
		Out-breaks	Animals.	Out-breaks	Animals.	Out-breaks	Animals.	Dogs.	Other	Out-breaks	Out-breaks.	Slaughtered *
GT. BRITAIN. Week ended July 18		16	28			14	44			..	42	343
Corresponding week in	1907 ..	17	19			11	22			3	43	236
	1906 ..	12	17			32	46			2	18	103
	1905 ..	13	16			27	43			3	29	127
Total for 29 weeks, 1908		661	881	3	112	465	1477			629	1310	6901
Corresponding period in	1907 ..	651	862			522	1254			406	1498	6926
	1906 ..	551	826			649	1224			291	701	3863
	1905 ..	578	806			691	1210			646	492	2278

Board of Agriculture and Fisheries, July 21, 1908.

IRELAND. Week ended July 11		..	..	..	..	..	..	..	..	1	3	114
Corresponding Week in	1907 ..	..	..	..	..	..	..	..	..	2	5	37
	1906 ..	..	..	..	..	..	..	..	..	1	3	33
	1905 ..	..	..	..	..	..	..	..	..	1	5	130
Total for 28 weeks, 1908		4	7	..	..	..	..	..	..	271	120	2291
Corresponding period in	1907 ..	1	3	..	..	2	2	..	..	184	71	1222
	1906 ..	3	7	..	..	3	10	..	..	149	54	632
	1905 ..	2	2	..	..	12	33	..	..	224	58	685

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, July 15, 1908.

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

Moving Quarantined Horses.

A case of considerable public interest was heard in Selkirk Sheriff Court on Tuesday, before Sheriff Smith, when Walter O. Robertson, veterinary surgeon, and owner of horses and livery stables, and William Hogarth, groom in his employment, appeared in answer to a charge of having between 25th and 31st May, removed two horses belonging to the former from the Fleece Hotel Stables without the necessary order, the said horses having been certified by the Veterinary Inspector for the County of Selkirk as being suffering from parasitic mange. Mr. J. M. Kinnaird, solicitor, Galashiels, tendered a plea of not guilty on behalf of the accused.

Deputy Chief-Constable Johnstone deponed that an order had been issued by the Board of Agriculture in reference to the outbreak of mange on the 7th of May last. On the 11th of May, Mr. Wm. Robertson called on him and said he suspected a case of mange, and he wanted the horses in the stables at Scott's Close, Fleece Hotel Stables, and Waverley Stables, to be examined by the veterinary inspector. Witness reported the matter to Mr. Connochie, the inspector, and told Sergt. Douglas to meet him at six next morning. Douglas did meet him, and he certified six horses as being affected. The two geldings in the Fleece Stables were amongst those affected. The Order of the Board of Agriculture had not been withdrawn.

Cross-examined: There was no specific description given of the two geldings. He thought they might be brown. Wm. Robertson did not say when he called on him that it was said that there were some cases of mange suspected in the stables. He accompanied the Veterinary Inspector to the stables, but they did not get into the Fleece Stables. Lees did not seem to have the key. According to the valuation roll the stables in Scott's Close belonged to William Robertson.

Sergt. Douglas deponed that he met Mr. Connochie and went with him to the stables. They saw Mr. Walter Robertson at the Waverley Stables, and told him they were going to the Fleece Stables, but he did not accompany them. Mr. Connochie examined two horses at the Fleece. That was on Monday, 11th May. William Hogarth was in charge of the stables then, and he was the only one present besides witness and Connochie. Mr. Connochie said both horses had mange, and that he would serve a notice. On the 12th May a notice was served on the police certifying that two horses in the Fleece Stables were affected with mange, and must not be removed without a certificate. On the 30th of May he saw one of those horses yoked to a machine in High Street. Hogarth was in charge. He recognised the horse and informed Connochie, who came and examined the horse in front of the Post Office. Connochie said the horse was strongly affected by parasitic mange. Hogarth, when spoken to, said he was obeying the instructions of his employer. He went then to the Fleece Stables, but could not find any of the two horses there.

Mr. W. D. Connochie, V.S., veterinary inspector for the county, said that on the 11th of May Inspector Johnstone notified him that there was parasitic mange amongst the horses in three stables of Messrs. Robertson. He went with Sergt. Douglas and examined the horses, and in the Fleece found two horses suffering from the disease. Hogarth was in charge. He examined the horses, and in his opinion they were affected by parasitic mange. He formally notified Mr. Robertson to that effect. He visited the stables again on the 25th with Constable Cessford, and found only the two horses. They were still affected, and were worse than before. On Saturday, 30th May, Sergt. Douglas informed him that one of the horses was in a machine at the Post Office. He had no difficulty in identifying the horse, and in his opinion it still had mange. He then went to the Fleece Stables and found neither of the two horses there. The horses were removed from the Fleece between the 25th and 31st May, while the Mange Order was still in force.

The Fiscal then handed Mr. Connochie a certificate signed by himself, which he read. It was to the effect that he had visited the Fleece Stables on 11th May, and there examined two horses under the charge of William Hogarth, which in his opinion were affected by parasitic mange. He served the necessary notice, which did not permit them to be removed without an order. On the 25th, when he again visited the stables, he found the horses still affected, and on the 30th he found they had been removed. On the 30th he found one yoked to a machine in High Street.

Cross-examined: He did not take any action until the Order of the Board of Agriculture came into force. He intimated to Bostock and Wombwell's stud groom that if he put up the 32 horses for which he had arranged at the Waverley Stables, he could not remove them. That was on the 7th, and the Order was not here till the 9th. He had already come to the conclusion there was mange in the stables. He had seen it on the street. He had not made any close examination of cases seen on the street. He had before then been called to attend animals that had contracted the disease from the stables or by contact with horses that had been in the stables. Inspector Johnstone notified him that there were horses in their stables that were affected or suspected—it was all the same thing.

Mr. Kinnaird proceeded to ask Mr. Connochie to describe the characteristics of parasitic mange, when the Fiscal intervened.

The Fiscal said it was incompetent to cross-examine Mr. Connochie on the line taken by Mr Kinnaird. He was entitled to cross-examine Mr. Connochie on the facts. He had lodged a certificate by Mr. Connochie to the effect that the horses were suffering from parasitic mange, and that was conclusive evidence for them. Mr. Kinnaird was not entitled to bring evidence to show whether this was mange or not, or to bring evidence to upset the opinion of the County Veterinary Inspector.

Mr. Kinnaird controverted this view. He proposed to put an Inspector of the Board of Agriculture (Prof. Dewar) in the witness-box. His reading of the Act was that a certificate such as that granted by Mr. Connochie was conclusive until it was rebutted. The Fiscal had called on the Inspector to prove his certificate, and as he was thus founding on the evidence of the Inspector, he (Mr. Kinnaird) was entitled to cross-examine on the contents of the certificate. Had the Fiscal not produced the Inspector to prove the certificate his case might not be so strong, and now he had an Inspector of the Board of Agriculture to rebut that evidence. Mr. Robertson was not satisfied with the Order issued, and on the 16th May he invited an inspection from the Board of Agriculture. Whether or not he was entitled to cross-examine on the question of whether it was mange or not, he was certainly entitled to bring in evidence in mitigation of the penalty if the charge was found proven.

His Lordship said he thought the case quoted by Mr. Pollok (the Fiscal) settled the question. It was not competent to enquire into the accuracy or inaccuracy of the Veterinary Inspector's certificate. That seemed to be directly dealt with by the Act. When the Veterinary Inspector had issued the certificate it must be held to be correct, even if nothing was wrong with the animal. It looked very large powers to be in the hands of one man, but he, as a judge, had nothing to do with that, but must administer the Act, so that evidence as to whether it was mange or not was incompetent.

Mr. Kinnaird asked that his objection to His Lordship's finding be noted on the grounds that the prosecution had produced the Inspector as a witness. The certificate was not lodged, but the inspector read it

as evidence, and not having been put in process, it became verbal evidence.

The Fiscal said he did not object to the Inspector being cross-examined on any points except as to whether it was mange or not.

Mr. Kinnaird then resumed the cross-examination of Mr. Connochie.

He (witness) found Hogarth in charge of the horses on the 11th. He went back on the 25th. Mr. Robertson did not write that he was going to work the horses unless he came to examine them. He was asked to go the second time by the Contagious Diseases Committee. No dressings had been applied to the horses when he examined them the second time. Mange would not cure of itself without dressing. He had liberated two horses in the Waverley Stables. He did not take any mites or parasites for microscopical examination. It was not necessary. He could detect from a cursory examination even a mild case of mange. In these stables and nowhere else in the town, he thought, the mange could be got. He knew horses brought from the stables two years ago that had it.

For the defence, Mr. W. O. Robertson deponed that on 12th May, when he had received notice from the Inspector he had put the horses off work and isolated them. Hogarth was the man for the 'bus, and he was discharged of the responsibility of looking after the other horses. The key of the stable where the horses were quarantined was kept in the office at the Waverley stables, and no one could get the key unless he went there for it. His tenancy of the Fleece stables expired on 28th May, and his horses there were removed to the Waverley stables.

Cross-examined: Palmer was in charge of the quarantined horses. The horses were removed from the Fleece stables before the term.

James Palmer, stableman, said he was instructed by Mr. Robertson to look after the two quarantined horses. A lock and key had been put on the stable where they were, so that none but himself could get in. He always carried the key. He took the horses out for exercise.

The Procurator Fiscal said it was almost unnecessary for him to address His Lordship. The only point they had to decide was whether Mr. Robertson and his employee had contravened the Order and removed the horses. There was no question as to the ownership of these two horses or as to who occupied the stables. All that Mr. Robertson would have had to do was to get an order from the Local Authority to remove the horses. They were not trying the question of whether it was mange or not, interesting though it might be. All they had to find out was whether the horses had been removed in contravention of the Order. Hogarth had been proved to be in charge, and Palmer had not given his evidence in a satisfactory way.

The Sheriff's Decision.

Sheriff Smith said Mr. Kinnaird's admission that there had been a contravention made it clear that there must be a conviction. The horses could not be moved without an Order from the Veterinary Inspector. He must find Robertson guilty, but the charge against Hogarth he found not proven.

Mr. Kinnaird said that while his Lordship had ruled that he could not lead evidence as to whether it was mange or not, he might be allowed to show that the view of eminent authorities was that it was not mange, and Mr. Robertson relied on these authorities. He had three certificates, which he asked leave to read. The first was dated 13th May, and was from Professor Dewar, Inspector of the Board of Agriculture, and Principal of the Royal Veterinary College, Edinburgh. It was in the following terms:—

Prof. Dewar's Certificate.

"At the request of Mr. W. O. Robertson, M.R.C.V.S., I have this day examined a grey, five years old half-bred gelding about 16.3 h.h. In my opinion this horse's skin is clean and healthy, and after a careful examination I cannot find the slightest trace of mange about him."

(Signed) J. R. U. Dewar, F.R.C.V.S.

Mr. Kinnaird stated that this certificate was equally applicable to the other five horses scheduled by the Veterinary Inspector, as Professor Dewar was prepared to testify in the witness-box.

Mr. Andrew Boyd's Certificate.

"I have this day examined the following horses for Mr. Robertson, Veterinary Surgeon, Selkirk—Grey gelding, bay mare, brown mare, brown gelding, bay gelding, and bay mare. I made a careful examination of the above horses, and also a careful microscopic examination, and my opinion is there is no parasitic mange affecting any of the horses I examined."

(Signed) Andrew Boyd, F.R.C.V.S.

Melrose, 13th May, 1908.

Mr. A. B. Tully's Certificate.

"I hereby certify I have this day examined a grey gelding, a bay gelding, a brown mare, and a bay mare at the Waverley Stables, Selkirk, also a brown geldlng and a bay gelding at the Fleece Stables, Selkirk, the property of Mr. W. O. Robertson, M.R.C.V.S. After a very careful examination I can find no trace of mange, and the skins of the animals are in a very healthy condition."

(Signed) A. B. Tully, M.R.C.V.S.

Kelso, May 14th, 1908.

There could be no doubt, Mr. Kinnaird said, from the evidence, that there was a preconceived idea in the Inspector's mind that there was mange in those stables. In Hawick, on the 7th, previous to the Order being issued, he told a gentleman who had arranged to stable 32 horses there, that if he did so he might not be able to get them out again. He did not think the Inspector was in that way doing any service to the community. The horses condemned by the Inspector, Mr. Robertson and his assistant (Mr. Thomson, M.R.C.V.S.) had under observation, and they were satisfied the horses were clean. Mr. Robertson then arranged for Prof. Dewar to have an examination. He came in his private capacity, and they had heard the result of his examination. He was the highest authority on veterinary matters in Scotland. Then they had the certificates of Mr. Boyd and Mr. Tully, gentlemen eminent in their profession. Had it been necessary he would have been able to show by microscopical examination that it was not mange. Mr. Robertson, as a large horse-owner, was bound to have an interest in keeping his stables clean, and he was satisfied they were clear of mange. With such eminent advice he had an excuse for what he had done. He had done all he could be expected to do. He wrote the Board of Agriculture on 20th May, and asked for an Inspector to be sent down, and he wrote the County Clerk on the 23rd He did not think the certificate of the Inspector was sufficient evidence of the existence of mange. Any reasonable mortal would in the circumstances be justified in thinking the horses clean, and even in moving the horses in face of an Order, which he was sure should never have been granted.

The Procurator Fiscal said it was only fair to Mr. Connochie to say that he had done all in his power to have an investigation made by the Local Authority and Board of Agriculture. The Board declined, being evidently satisfied with the investigation he had made before the Order was promulgated. Mr. Connochie had courted the fullest enquiry.

THE SENTENCE.

Sheriff Smith said he could not look at the certificates of the experts as to whether it was mange or not, and the certificates were subject to reservation, inasmuch as these experts had gone into the witness-box and been subjected to cross-examination. He thought Mr. Kinnaird was justified in putting the certificates forward to show that Mr. Robertson thought the horses were not suffering from mange. Mr. Robertson certainly seemed to be of the opinion that it was not mange, and had gone to the trouble and expense of getting these opinions, and his own opinion had not altered. What he (the Sheriff) had to consider was, however, that Mr. Robertson chose deliberately to disobey the Order. There was no lawful excuse for him. There might be a hiatus or defect in the Act. It was possible in certain circumstances that the Inspector might be quite wrong, and the owner of animals would be quite at his mercy, for the Inspector had only to grant a certificate and put it in force. In such a case it was difficult to know what remedy the owner of an animal could have. But the method adopted by Mr. Robertson was no remedy, but a disregarding of the provisions of the Act. He imposed a mitigated penalty of £2.—*The Border Standard.*

Royal College of Veterinary Surgeons.

EXAMINATIONS IN LONDON.

At a meeting of the Board of Examiners held in London on July 10th for the Written, and on and between July 14th and 17th inclusive for the Oral and Practical, the following gentlemen passed their Final Examination :

Mr. W. H. Andrews	Mr. S. J. Motton *
W. E. Blackwell	E. Measures
D. R. Chatterley	E. McSwiney
A. F. Dykes	P. A. McCorry
D. Evans	D. O'Kell
H. Gooch	J. C. S. Powell
G. W. Godwin	E. S. Pindar
G. E. Henson	F. M. Reynolds
C. F. Johnston	A. W. Shilston
W. Kennedy *	W. B. Towell

The following passed their Third Examination :

Mr. T. F. Addison	Mr. G. N. A. Hall
A. W. Brasnett	E. C. Lloyd *
E. J. Barrowcliffe	F. Marks
G. F. Banham*	B. Mellon*
J. T. C. Bradshaw	E. P. Offord
J. R. Conchie	V. Pride-Jones
V. S. M. Cope	R. H. Smythe *
M. Cahill	G. V. Slinn
P. D. Carey	H. G. Tabuteau
D. H. Dimes	L. Thompson *
A. B. Fewings	F. A. le Poer Trench
N. B. Francis	G. Wacher
A. E. Froggart †	H. S. Woods
V. Franklin	T. D. Young
H. W. Good *	

The following passed their Second Examination :

Mr. D. S. Beck	Mr. B. A. Myhill
J. McK. Brown	A. V. Nicholas
D. A. E. Cabot	S. C. Rowbotham
O. Dixon	G. A. Roberts *
F. L. Eady	W. K. Stephens †
J. T. Faithful-Davies	H. D. Sparrow
J. A. Gosling	T. L. Vaisey
B. Gorton	T. W. W. Wright *
J. C. Gaunt	

The following passed their First Examination :

Mr. F. G. Buxton	Mr. F. F. Horton *
V. Boyle	F. C. Minett *
R. B. Cockburn *	W. A Pool
T. J. Davis	E. B. Reynolds †
R. T. Davis	E. J. B. Sewell
J T. Edwards †	G. V. Steevenson *
G. V. Golding	B. M. R. West *
H. E. Hornby *	

Marked thus * passed with Second Class Honours.
" " † " " First " "

Personal.

CHASE.—At Mafeking, Cape Colony, on June 25th, the wife of W. H. Chase, F.R.C.V.S., of a daughter.

OBITUARY.

EBENEZER B. M'LAY, M.R.C.V.S., Strabane.
Graduated, Glasgow, April, 1881.

Mr. M'Lay died on June 5, at his residence, Cross House, Main Street, Strabane. The interment was in the Strabane Cemetery on Sunday, June 7th.

A correspondent writes :—"Mr. M'Lay, M.R.C.V.S., qualified in Glasgow some 25 years ago, and although his name may not be widely known he did much good for the profession in a quiet way. He was a pioneer of the profession in the County of Donegal where he settled, and by hard work, added to an extremely generous and kindly personality, he built up a practice. Mr. M'Lay was inspector for his district for the Board of Agriculture for Ireland, and also for portions of the Counties of Donegal and Tyrone under the respective County Councils."

ANÆSTHETISING THE HORSE IN THE STANDING POSITION.

Sir,

During the last thirty years anæsthetising the horse in the standing position has been from time to time adopted by certain sections of the profession, and has received various degrees of popularity, although it has never been at any time generally practised.

Credit for the introduction of this method has been ascribed to various of our members, and at each revival it seems to have been Mr. So-and-so's method. It has even come to the front again recently, and I thought it might be of interest to those of your readers who do not already know, to hear that the method was well described so long as twenty-four years ago, by Mr. Richard Roberts, F.R.C.V.S., of Tunbridge Wells, (at that time of Kendal), in a paper on "Chloroform : Its Uses as an Anæsthetic in Veterinary Practice," read at the Border Counties Veterinary Medical Society, October 3rd, 1884, and published in *The Veterinary Journal*, vol. xx., 1885, p. 10.

If, therefore, credit be due to anyone for prominently reviving and making known this easy and comparatively safe method of anæsthetisation of horses, that credit is due to Mr. Roberts, who, I believe, has systematically adopted it since, before and up to now. Without wishing to take any credit away from Mr. Roberts, I would, however, like to mention that it has been occasionally used, or at least individual practitioners have adopted it, ever since anæsthetics were discovered.

Like all other *apparently* new methods, this one becomes a matter of comparative simplicity when the operator has given it a sufficient trial. The fault of the beginner is that he does not give the animal rein enough ; he holds on to its head too rigidly, much to his own discomfort and disturbed equilibrium. It is a law in mechanics that the longer the lever is the more power one will have. Space is not always available, but one need not despair, because this method *can* be used in a loose-box, or even in a stall.

In bringing this matter before the notice of your readers I have only the desire to see that credit is given to whom credit is due. I am, however, very pleased to see a really old method becoming generally adopted as if it were a new one. Prejudice dies very hard, but in the case of anæsthe-

tisation of animals it is slowly but surely disappearing. Perhaps in time it will become illegal for anybody to perform a painful operation on an animal unless it has been previously anæsthetised. It is the duty of the profession to advance humanity towards the brute creation rather than let the public force upon the practitioner the application of more humane methods than were formerly, and are even now practised in his operations. It is true that many noble men have from time to time urged the general adoption of anæsthetics, but it has not in this, the 8th year of the 20th century, become an accomplished fact. Still, one sees signs of improvement, and therefore should be thankful for all small mercies. ABUSUS NON TOLLIT USUM.

Veterinary Societies—Addresses.

BORDER COUNTIES V.M.S.
Pres: Mr. J. W. Hewson, M.R.C.V.S., Wigton
Hon. Sec. (pro tem.): Mr. F. W. Garnett, M.R.C.V.S., Dalegarth, Windermere
Meetings, Second Friday of Feb., June, and October

CAPE OF GOOD HOPE V.M.S.
Pres. Mr. J. D. Borthwick, M.R.C.V.S., Cape Town
Hon. Sec. & Treas. Mr. J. W. Crowhurst

CENTRAL V.M.S.
Pres. Mr. J. Willett, M.R.C.V.S., 6 Harley Place, London, W.
Hon. Sec: Mr. H. A. MacCormack, M.R.C.V.S., 122 St. George's Avenue, Tufnell Park, N.
Meetings, First Thursday in each month, except August and September, 10 Red Lion Square, Holborn, at 7 p.m

CENTRAL CANADA V.A.
Hon. Sec: Mr. A. E, James, Ottawa

CENTRAL V.A. OF IRELAND.
Pres: Mr. P. J. Howard, M.R.C.V.S., Ennis
Hon. Sec. Mr. M. J. Cleary, M.R.C.V.S., Streamstown, Moate
Treas: Mr. J. F. Healey. M.R.C.V.S., Midleton

EASTERN COUNTIES V.M.A.
Pres: Mr. F. Low, M.R.C.V.S., Norwich
Hon. Sec. & Treas: Mr. H. P. Standley, M.R.C.V.S. Wymondham
Meetings, Second Tuesday, Feb. and July

GLASGOW V.M.S.
Pres. Principal McCall.
Hon. Sec. Mr. James Lowther

VET. MED. ASSN. OF IRELAND.
Pres: Prin A. E. Mettam, R. V. Coll., Dublin
Hon. Sec: Mr. J. McKenny, M.R.C.V.S., 116 Stephens green-west, Dublin
Hon. Treas: Mr. M. Hedley, F.R.C.V.S, 6 Royal Terrace West, Kingstown

LANCASHIRE V.M.A.
Pres: Mr. E. H. Stent, M.R.C.V.S., Gladysmount, Stretford, Manchester
Hon. Sec.: Mr. G. H. Locke, M.R.C.V.S. Grosvenor-street, Manchester
Meetings, 1st Thursday in April, June, Sept., & Dec.

LINCOLNSHIRE V.M.S.
Pres. Mr. W. G. B. Dickinson, F.R.C.V.S., Boston
Hon. Sec: & *Treas*: Mr. G. Lockwood, M.R.C.V.S., Peterborough
Meetings, Second Thursday Feb., June, and October

LIVERPOOL UNIVERSITY V.M.S.
Pres: Prof. Boyce, F.R.S.
Hon. Sec. & Treas: Jno. T. Share-Jones, University, Liverpool
Meetings, May, July, October, January.

VET. ASSN. OF MANITOBA.
Pres: Dr. W. E. Martin, Winnipeg
Hon. Sec. & Treas: Mr. F. Torrance, Winnipeg

MIDLAND COUNTIES V.M.A.
Pres: Mr. J. W. Coe, F.R.C.V.S., Copeland-st., Stoke-on-Trent
Hon. Sec: Mr. H. J. Dawes, F.R.C.V.S., Camden House, High-st., West Bromwich
Meetings, Second Tuesday, Wednesday, Thursday, and Friday alternately in Feb., May, Aug. and Nov.

NATIONAL VET. ASSOCIATION.
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Meetings, First Tuesday, March and September

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Pres: Mr. Reid, M.R.C.V.S., Auchtermuchty.
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Meetings, First Friday, Mar., June, Sept. and Dec.

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Meetings, Third Thursday, March, July and November

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Pres: Mr. Hugh Begg, M.R.C.V.S., East Kilbride
Hon. Sec: & *Treasr*: Jas. Macfarlane, M.R.C.V.S., 75 West Nile Street, Glasgow
Meetings, Second Wednesday, May, Oct. and January.

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Hon. Treas: Mr. H. G. Bowes, M.R.C.V.S., 106 Clarendon-road, Leeds